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BLIND GIRL READING.

BLIND PEOPLE:

THEIR WORKS AND WAYS;

WITH SKETCHES OF

THE LIVES OF SOME FAMOUS BLIND MEN.

97623

BY

REV. B. G. JOHNS, M.A.,

CHAPLAIN OF THE BLIND SCHOOL, ST. GEORGE'S FIELDS.

ILLUSTRATED WITH WOODCUTS.

NN-d-16

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
1867.

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TO

EDMUND CHARLES JOHNSON, Esq.,

IN TOKEN OF

OLD AND TRIED FRIENDSHIP.

SCHOOL FOR THE INDIGENT BLIND, ST. GEORGE'S FIELDS, SOUTHWARK.

PREFACE.

THE lights and shadows which chequer the life of a blind man are as bright and deep as those which befall the rest of the world. Night shuts him in all round; but work, and joy, and peace, and content—or selfishness, sloth, discontent, and regret—are as often found within his narrow circle, as in the wide one of broader day. Few but they who have felt it know how deep that cloud is; nor, indeed, under what peculiar disadvantages, difficulties, and trials, the Blind labour. But the writer knows full well how in the midst of all these trials they who have to meet them shew many a trait of manly courage, of faith, and hope, which might be looked for in vain elsewhere. He has found under this cloud many a willing, thoughtful, learner; many a quiet, grateful, heart; industry and perseverance of the highest order; even if far more rarely, here and there, traces of self-will and petulance of the lowest. The aim of

the following pages is to shew what these lights and shadows are, what the difficulties are, and how they are met; as well as to give a fair idea of the general condition of the Blind throughout England; of what has been, and what may yet be, done for its improvement. For the last seventeen years the author's life has been given to labouring among them, with increasing interest and pleasure, and not without some new insight into their special needs, powers, and characteristics. As far as possible he has endeavoured to speak from his own experience and observation, and, where he has had to rely on others, to verify their words; a task that is not always so easy as it might seem. For the Blind, as a class, are apt to be shy and reserved in speaking of their own peculiar state, or more special "works and ways." Feeling their own isolation, they are inclined to shrink from contact with the outer world of light, and rarely give expression to their thoughts, but in a form too brief or too general to satisfy the inquirer. Yet, wherever it was possible, recourse has been had to their own words, which have been left to tell their plain story.

It would have been easy to add to the number of the short biographical sketches at the end of the volume; but, on examination, it was found that the

information concerning many other famous Blind people was of far too brief and fragmentary a kind to admit of being woven into a continuous story. A few, therefore, of the more complete cases have been selected as specimens, and to these some addition may perhaps be made at a future time. The scanty leisure of a busy life has been heartily given to the task of rendering this little book as complete as the author could make it; and though no one can be more conscious of its imperfections than himself, it may still serve to convey, he hopes, a fair and true picture of a class in whose welfare he takes a deep and unbroken interest.

B. G. J.

All Saints' Day, 1866.

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BLIND PEOPLE:

THEIR WORKS AND WAYS.

CHAPTER I.

IN the year 1712, in one of the Fellows' rooms at Christ's College, Cambridge, sat three learned and famous men discussing a knotty point over the winter fire. Two of them were antiquaries, as well as scholars, and on the table before them lay a small drawer of Roman coins, concerning some of which the battle waxed hot. Over one headless emperor, whose very name and date none but the initiated could guess at from the coin before them, the discussion grew especially fierce. It had been purchased as a rare and matchless gem by the elder of the two collectors, who both agreed as to its extreme value, but differed as to its exact date. Their friend by the fire took no part in the discussion, but, at last, when the coin was handed to him for examina-

tion and judgment, his answer was prompt and decided enough. Strange to say, he did not glance at the medal, but having felt it over very carefully with the tips of his fingers, he next applied it to his tongue.* This done, he quietly laid the headless Augustus down on the table, saying as he did so, "50 B.C., or 88 A.D., the thing isn't worth a shilling; I doubt very much its being gold, and I'm sure it isn't Roman;" and the next day proved that he was in the right: thus, oddly enough, fulfilling the old Portuguese Proverb, "*Achou o cego hum dinheiro*," "The Blind man has picked up a Coin." The thing that had been shown to him and detected was a

* *John Gough*, the Blind Mathematician and Naturalist of Kendal, always examined a rare plant in the same way, by applying it to the tip of his tongue; and when in his old age one such was brought to him, having examined it in this fashion, he at once called it by the correct name, adding that he had seen but one specimen of it, and "that was fifty years ago." Little is known of this Gough but that he was blind from his infancy; that he was the son of poor people at Kendal; that he acquired a fair knowledge of the Classics at an ordinary Grammar School, devoting more time and thought, as he grew up, to Mathematics, in which he greatly excelled, and numbering among his pupils the famous names of Whewell, second Wrangler, and late Master of Trinity College, Cambridge; Dawes, fourth Wrangler, Gaskin, second Wrangler, and King, senior Wrangler; as well as John Dalton, the President of the Manchester Philosophical Society. Gough was born in 1757, ob. 1825.

clever counterfeit, got up for the occasion of an antiquarian sale, just as Roman coins were dug up a year or two ago in making the Thames Embankment. Yet this keen judge was Nicholas Saunderson, a blind man, who had never set eyes on a coin good, bad, or indifferent; having lost not only his eyesight, but even his very eye-balls, by the small-pox in 1682, when but a twelvemonth old. He was now Lucasian Professor of Mathematics in the first University of the World, a friend of Whiston, Halley, and Sir Isaac Newton, whose 'Principia' formed one chief subject of his public Lectures. His whole life from boyhood had been one of striking interest, though we can here do no more than touch on the few salient points which startle us in the career of a blind man. At the Free School of Pennistone, in Yorkshire, and with the help of a reader and such few books as his father, an exciseman, could procure for him at home, by dint of unwearied perseverance he managed to acquire such a knowledge of the Classics as to master the works of Euclid, Archimedes, Diophantus, and Newton, in their original Greek and Latin. This was all done before he was twenty; at twenty-five he was a famous teacher in Cambridge; at thirty, Lucasian

Professor, M.A. by royal mandate, lecturing on the solar spectrum, the laws of light, and the theory of the rainbow,—on none of which he had ever looked.

His genius as a mathematician, his keenness of judgment, his accuracy as a reasoner, and his dexterity and quickness in performing arithmetical operations, naturally lead to the question of how far the sense of touch in the blind, as well as the mental powers, can be so educated as to atone for or supply the place of the sense that is gone. The common notion is that when a child loses his sight, the other bodily and mental powers are all stimulated and sharpened to such an increase of new and keen life as to supply the deficiency—touch, hearing, taste, and intellect all becoming doubly acute. But this is only one of the plausible fancies by which people relieve their minds from the uneasy contemplation of a hopeless calamity; for, on the contrary, wide and long experience has clearly proved that in ninety-nine cases out of a hundred the loss of sight for a greater or less time shatters the whole framework of mind and body; and the remaining senses and powers, instead of springing into new life, are weakened and depressed. A man does not become

blind by merely shutting his eyes.* "Blindness," says Guillié, "not only deprives a man of the sensations which belong to sight, but often modifies and distorts all his thoughts. *Untrained* he may have no idea of decorum, of social propriety, or of modesty." (*Du Puiseaux* used to say, that he could not understand why one part of the body should be covered more than another.) His loss of vision seems to affect every part of him. If it befalls him suddenly, when grown up, he is for a time utterly prostrated; and many a long weary month may pass before he can so far rouse himself as to set to work at any task with hope or spirit. But if born blind his lot is still worse. He is from the first more or less cut off from the rest of the world, treated in some respects as an inferior, weaker and less capable than his friends and companions; and though most unwilling to believe this himself, he at last sinks into a state of isolation in which "the darkness may be felt." "For nine-tenths even of seeing men, daily, customary, life is a dark and mean abode.

* Certainly not Horatio Nelson, who, when his Admiral signalled to him to bring his ship out of action, said to his First Lieutenant, "You may see the signal; I cannot: you know I am blind on that side. Nail my colours to the mast."

Unless he often opens the door and windows, and looks out into a freer world beyond, the dust and cobwebs soon thicken over every entrance of light, and in the perfect gloom he forgets that beyond and above there is an open, boundless, air." * And this is the very peril to which the blind boy is specially exposed. Doors and windows, entrances for living light, are the things he never opens; they are unknown to him, or utterly beyond his reach. If his friends are well off, and educated people, all the appliances that education demands and money can procure are at once brought to bear upon him. The hand of love leads him to the tree of knowledge, proves that it is within even his reach; shows to him a spark of light in the darkness, how the spark may be fanned into a flame, and the flame made to shine cheerily on the up-hill path. But if his friends be poor, or uneducated, the whole treatment is reversed. Too often he is pushed aside into a corner as an encumbrance, or at all events one for whom little or nothing can be done; treated perhaps not unkindly, but gradually spoiled in the worst sense of the word by a mixture

* Sterling.

of careless neglect and more worthless indulgence. In this case the boy sinks into a condition little better than that of an animal; vicious or mischievous, amiable, lazy, or apathetic, as the case may be; but probably into darkness moral as well as mental, greater or less according to the light about him. Bodily pleasures are his main thought; he becomes selfish; selfishness at times makes him talkative, but as often moody; he grows silent, reserved, nervous, timid, opinionated, and discontented. These are too often (whatever optimists may imagine to the contrary) the characteristics of poor blind children.

With some such characteristics we will suppose a boy to be sent up from the country to some Blind School—say that for the Indigent Blind in St. George's Fields. Let us see what becomes of him, if a boy of average ability. He is brought into an extensive and rambling building, containing a large number of rooms, and enclosing two good-sized playgrounds respectively for girls and boys. This building stretches over nearly two acres of ground; and with almost every part of *his* * side of it—all its outer shops and dependencies—he has to become

* It is divided into two distinct wings, one exclusively for males and the other for females.

acquainted almost entirely by touch and ear; with a little help from a companion's longer experience. It is all so utterly new and strange to him that for the first day or two he is entirely dependent on some pupil's or teacher's hand to get as far as the school-room, the chapel, dining-room, or basket-shop, all of which are widely apart. But "first impressions with the blind are all in all,"* and within a week the chances are that out of his eighty blind fellow pupils he has chosen one as a companion, and probably his friend, for several years to come, who, if need be, convoys him across the open yard to any special point—to the dormitory, or through the more intricate navigation of staircase leading to the band-room.† In a month all the plain sailing is fairly mastered. He can find his way from the dining-room to the basket-shop, and down that shop, 150 yards long, just to the very site of his own box on which he sits to split the withies for basket-work. He knows his own box,

* Guillié, p. 47.

† This Band consists of about thirty instrumental performers, violins, flutes, and brass horns, &c., and manages to play with surprising cleverness such music as one hears from a good German band.

too, from Smith's and Brown's on either side of him. In a year he will know probably his own tools from theirs by some little flaw or feature not

BLIND BASKET-MAKER.

patent to the eye of a looker-on; in a couple of years he will know the handle of the door to music-room No. 5 from that of No. 6; he will run quickly

with a half-finished basket in his hand from the workshop, across a wide yard, exactly to the very door-step of the open shed in which is a tank for soaking his willow-work. His senses of touch and hearing are being silently and surely educated; as their education progresses they become keener—hearing as a sharp and watchful sentinel,* guide, and spy; touch as his servant-of-all-work and detective. To the seeing, touch† is an auxiliary, but to the blind boy it is the primary sense of all. By it he knows his own clothes, and almost all the property that he possesses‡—his tools, box, bed,

---

* Thus, his keenness of hearing once saved Blacklock's life. He was walking in a garden down a path leading straight to a deep well; and into this he would have certainly walked had not a favourite dog run on before him, and by *the sound of its feet upon the board*, by which one half of the well was covered, apprised him of his peril.

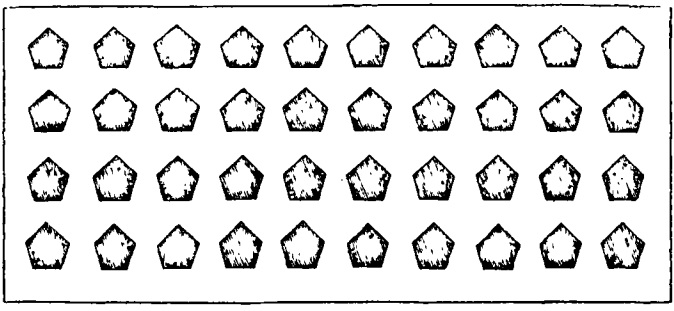
† Oddly enough, this keen and trusty servant, touch, may fail the blind boy if partially restored to sight. A patient couched by Cheselden, though blind from birth, regained her sight; but she no longer knew her keys, pencil, or watch as she had previously done by touch. As the higher sense entered, the lower retired, as if into abeyance.

‡ A blind boy sent by his master to sell fish in the village, cut certain nicks or notches in the head or tail of each cod, and thus wrote down the price of his goods where his finger could feel it; and yet not to be detected by the eye of the customer.

hat, fiddle, cupboard, seat in chapel, school-room, and workshop; by it he reads his chapter in St. John or in Robinson Crusoe; he plays chess or dominoes; works a sum in Long Division, or writes a letter home to his mother which she can read with her eyes, and he with his fingers. By the help of touch he weaves a rug of coloured wools embracing every variety of scroll-work, or of those peculiar flowers and fruits which grow only on carpet-land; or fringes with delicate green and red a door-mat for a lady's boudoir; by touch he *sees* any curiosity, such as a lamp from the Pyramids, or a scrap of mineral, which you describe to him, and which, having once handled, he always speaks of as having been seen. He *thinks* he can read a good deal of your character by touch when you shake hands with him; and when he has heard you talk for a few minutes he will make a good guess as to your age, temper, ability and stature. Saunderson, at times, guessed even more than this. He had been sitting one day and pleasantly chatting with some visitors for an hour, when one of them wished the company good morning, and left the room. "What white teeth that lady has!" said the sarcastic professor. "How can *you* possibly

tell that?" said a friend. "Because," was the ready answer, "for the last half-hour she has done nothing but laugh." This was shrewd enough; but specially characteristic of him as a blind man.

To illustrate the way in which a blind boy of fair ability manages to accomplish by touch some one or two of those tasks just now enumerated, let us take three of the more curious as types of the rest; how he does a sum in long division, how he writes a letter, and weaves a rug. His slate is a board of about 12 inches by 10, bound with metal round the edges, and containing about 190 pentagonal holes a quarter of an inch apart, arranged in the following fashion:—

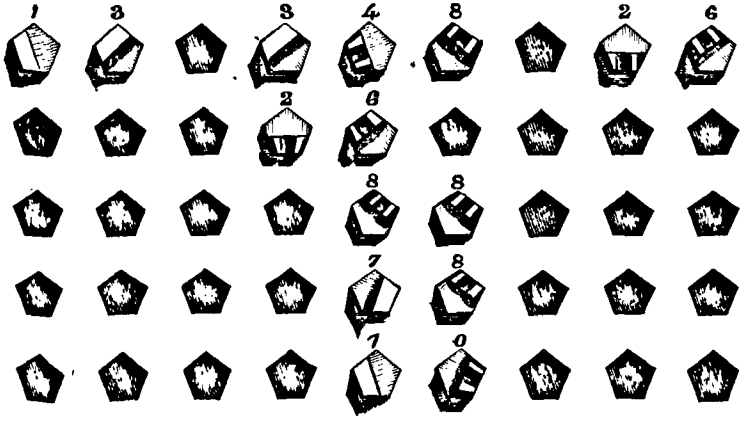


Into these holes he inserts a five-sided metal pin, which, according to its position, and the end kept uppermost, represents the numerals from 1 to 0. The

pin is of this shape and aspect, under its two positions. When used with the obtuse end upwards, the pin

in its five different positions represents the five odd numbers, 1, 3, 5, 7, 9; when reversed, and with the bifurcated end upwards, it represents 2, 4, 6, 8, 0, any of which the blind

boy easily and rapidly reads by running his finger along the tops of the pins. A Long Division sum would be represented thus:—



$$
\begin{array}{r}
13\,)\,348\,(\,26 \\
26 \\
\hline
88 \\
78 \\
\hline
10
\end{array}
$$

the two pentagonal holes without numbers marked over them being blanks, left so purposely by the arithmetician instead of the curved lines drawn by his rival with eyes to separate divisor, dividend, and quotient. It is obvious, therefore, that all ordinary sums in arithmetic may be worked by a blind boy almost as quickly as, and far more plainly than, by the schoolboy on his greasy slate. The boy without eyes, too, when he has mastered the four simple rules, very often beats his opponent by performing parts of his work mentally, and supposing figures which he has not written down, and by having to draw neither lines nor curves, to the great saving of time and labour. Nor does he stop to write down the "Question" in the Rule of Three, or Interest, &c., but, after a moment's thought, plunges boldly into the puzzle, and solves it with half the figures required by an ordinary arithmetician.

The board on which Saunderson performed his arithmetical calculations was a far more complicated affair, and although we have a woodcut of it, its exact nature and use are hard to be understood. No account of it we have met with offers a clear explanation of the various parts; but we will do our best to condense and improve that written by Hinchcliff, his pupil and successor.

The board was thin and smooth, and rather more than a foot square; fixed in a narrow frame slightly

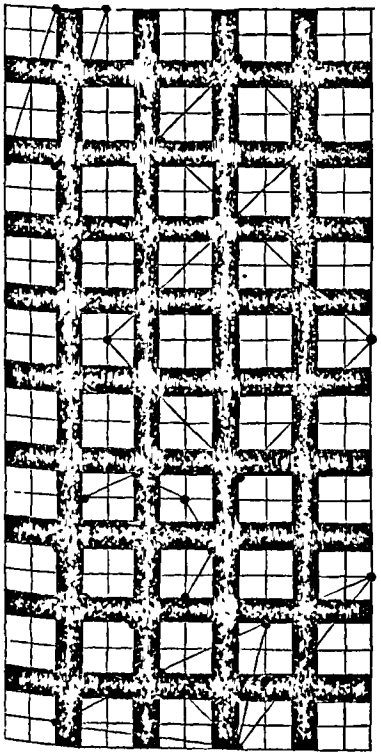


Fig. 1.

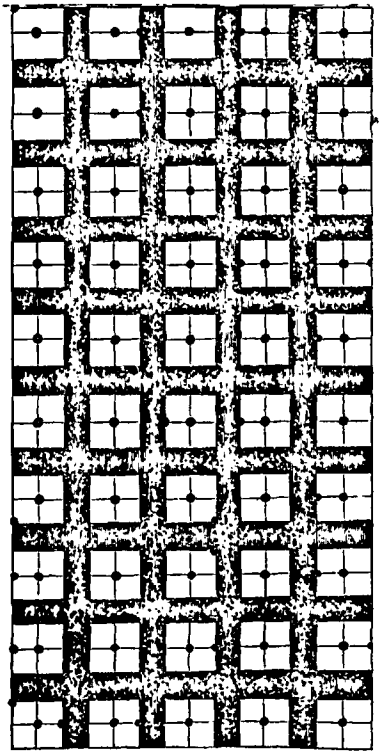
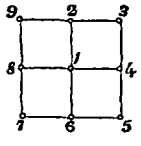


Fig 2.

raised above it, containing a great number of cross parallel lines drawn at right angles to each other. The edges of the board had grooves about two inches

apart, and to each groove belong five parallels, each square inch being subdivided into one hundred smaller squares. At every point of intersection was a small hole, to receive a peg or pin. Saunderson always kept two boxes of pins by his side when at work, and these, by difference of position or head, expressed to him the various numerals; a larger peg in the centre of each little square standing for zero, a smaller one for 1. The other numerals stand thus—



and were at once detected by their relative position to the central 0 or 1, the greater pegs (for 0) being always in their place when not needed for 1; serving him for guides to preserve his line of figures and to prevent other mistakes.

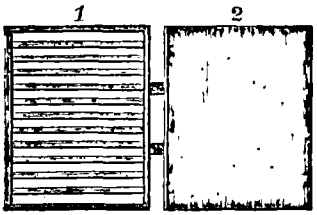
Saunderson placed and displaced the pins with inconceivable quickness, but the exact way in which he used them in performing his arithmetical calculations is altogether a mystery. We imagine that by far the larger portion of his work must have been done mentally, and that he used groups of pins from time to time, in certain relative positions, to express certain stages in the operation, as memoranda to which he could refer again and again with a touch, and thus verify his work. Be this as it may, how-

ever, there is no doubt that he worked problems of every—even the highest—kind, both in common arithmetic, fractions, decimals, or algebra, with great rapidity and equal accuracy. A glance at that part of the board marked Fig. 1 will show how easily he adapted it for the working of geometrical problems by placing pins at the angular points, and surrounding them with a silk thread, so as to form any figure which he required. Genius as he was, and full of resources which genius alone can devise and use, he would doubtless have rejoiced to possess one of the plain and simple arithmetic boards now in use at St. George's Fields.*

Embossing a letter is a far easier task than a sum in arithmetic, and the horrors of spelling are less than those of Long Division. When once a boy has learned to read a chapter of 'Robinson Crusoe' in Alston's type (the Roman letter), he is very soon able to write home and tell of his accomplishments. The process is just like that which children call pricking a pattern in paper, except that instead of being managed with a single pin-point, an entire letter of pin-points is pierced by one single pressure. The embossing frame consists of two parts, one a plain

* Saunderson, with all his cleverness, was never able to write.

slab of wood about 14 inches long by 8 wide, covered on one side with a thick layer of flannel or velvet; and the other of a plain framework of horizontal bars about half an inch apart; the two being connected by hinges which join them together as a slip of leather does the two covers of a book. When the blind boy wishes to write a letter, he lays his sheet of paper on side 2, and folds over upon it side 1, through the bars of which he presses small wooden types, each bearing on one end a Roman letter formed of projecting pin-points. These he forces steadily home through the paper into the flannel or leather below, placing each letter as he does so the reverse way, so as to make the embossing correct on the other side of the paper. The process is a slow one, as every letter has to be separately stamped down and held in its place till its next neighbour is introduced, that not a grain of precious space be wasted; but at last, duly reversed and in good order, appear the pleasant words,



MY DEAR FATHER.

And proud enough, we may well imagine, is Sam

Trotter, the village blacksmith, when he gets his first letter from "our blind Johnny in London;" it goes the round of the whole community, and in spite of some grievous lapses in orthography, is fairly worn out at last with continual handling, unless locked up by the good wife as too precious a document for the perusal of ordinary mortals. Their wonder will be doubled when Johnny comes home next year at the Midsummer holidays, and reads off his own epistle with the tips of his fingers.

The Weaver sets to work with a Loom of the ordinary kind, which therefore need not be described; and the only problem is, how shall the blind workman accurately follow a pattern of which he cannot see a single step, in colours which he cannot distinguish. We pause only for a moment, by the way, to notice one common and popular error still afloat, viz., that some clever blind people have the power of detecting colours by the touch. All we can say is, that those who have had the experience of many years, and opportunities for the personal examination of many hundreds of blind persons, of all ages and ranks, including some of remarkable ability, have not been able to find the remotest trace of such a power.

"I know the difference of colours," said a blind

man, "because I remember them; but I can't distinguish them by touch, nor do I think that any blind man in the world ever could or did." Two similar substances, of different colours, were given to him to feel, but he could not distinguish between them. "Both are the same to me," he said, "but one feels stiffer than the other. I know hundreds of blind people,—and none of us ever heard of one that could tell colours by the feel. There's blind people in the schools that tells the colours of their rods; but they does it by putting their tongue to them, and so they tell them that's been dipped from them that hasn't."*

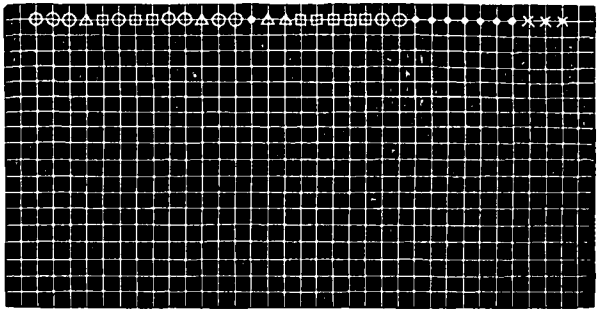
There is no more resemblance now between sounds and colours† than in the time of Guillié, fifty years ago; so that no description will enable a blind man to discern between a crimson poppy and the azure corn-flower; nor can there be any perceptible difference of texture in one morsel of wool, paper, cloth, or feather stained red, and another of grassy green. Dr. Moyes, indeed, who lost his sight at three years of age, says that "red gave him a disagreeable sensation, like the touch of a saw,"‡ and that as other

* *Vide* 'London Poor,' p. 402, vol. i. † *Vide* Guillié's Essay, p. 3.
‡ 'Life of Moyes,' by Wilson, p. 172

colours became less intense they decreased in harshness, until green conveyed to him an idea like that which he felt in passing his hand over a polished surface. But we suspect that Dr. Moyes was only trying to rival the happy shot of another blind man, who, says Locke, declared that scarlet was to him "like the sound of a trumpet." Trumpets and scarlet go well together, and were perhaps even more frequently heard of and met with seventy or eighty years ago than they are now, and the name of one might well suggest the other. A pupil of Guillié's, at the Paris Blind School, translated *rubente dexterâ*, from Horace's Second Ode, by "flaming right hand." Being pressed to translate literally, he gave as an equivalent "*red.*" When asked what he meant by "*a red arm,*" he said that he did not think, like Locke's blind man, that the colour red was like the sound of a trumpet, but he had translated it *flaming*, because he had been told that fire was *red;* whence he concluded that heat is accompanied by redness; which determined him to mark the anger of Jupiter by the epithet flaming, because when irritated one is hot, and when *hot* one must be *red.*

Touch, therefore, which can do so much for the blind workman, can do nothing for him here; but

nevertheless, as the Great Exhibition proved, he can weave you a rug bright with all the colours of the rainbow, exactly after the pattern which you prescribe: scroll-work, leaves, fruit, flowers, lozenges, stars, or cross-bars. In the first place, his threads of wool are all placed for him by his side, in one exact order, say white, crimson, blue, yellow, and maroon. They are always in the same order and place, so that he takes up whichever he needs with unerring certainty. Hung up to the beam in front of him, but easily within reach of his fingers, is a square of smooth, thin deal, on which is traced the pattern of his rug in nails with heads of every possible variety of shape—round, square, diamond-shape, or tri-



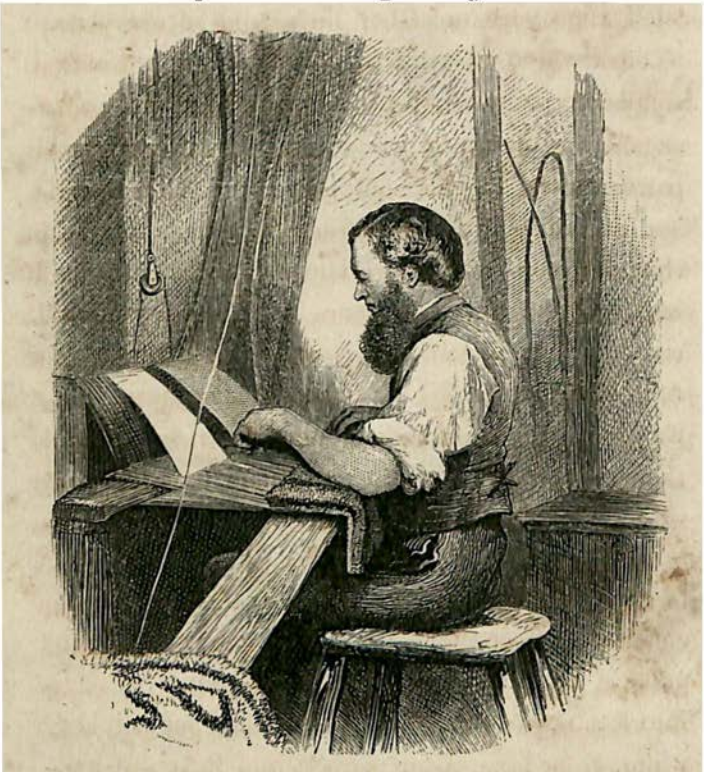
angular; tacks, brads, and buttons; some driven home to the surface of the board, others raised one-

tenth of an inch above it; but all telling their own story of red, green, white or blue. The board is ruled thus with cross-bar lines, and at every point of intersection a small hole is bored, into which is slipped a nail with its head square, round, or triangular, as the pattern requires. The boy reads his pattern along the horizontal lines from left to right, and according to the teaching of the nails weaves in the gay scroll-work of brilliant colours as deftly as if he saw every tint. A glance at the above cut will show the first line of a nail pattern; O standing for red, △ for white, □ for blue, • for maroon, and X for green; for the arrangement of which in due order the weaver has of course to depend on his teacher with eyes. But if his touch is keen, and his finger not hardened by work, his pattern can be set for him in a far easier and simpler shape by the help of a few embossed letters and figures on a sheet of thick paper. The line of nails in the above cut translated into letters, would run thus, B standing for red, D for white, C for blue, A for maroon, and R for green:—

B.3: D.1. C.1. B.1. C.2. B.2. D.1. B.4. A.2. D.1. C.4. B.2 A.7. R.3.

These letters and figures the blind weaver quickly reads with his finger; and then readily takes from

his row of *arranged* colours the number of threads or strands requisite to bring to light those curious



THE BLIND WEAVER.

flowers that grow in the meadows of carpet-land; or the still more curious squares, triangles, lozenges, curves, and scrolls, that crop out among the blossoms;

weaving on, unconsciously, yet correctly, in the dark, with quiet, patient skill that well deserves the word of praise from his teacher for which he gladly looks.

Touch, then, which does so much for the blind boy, will not do everything; it will not distinguish colours; as the eye of the deaf-mute can never hear, so the fingers of the blind can never see. Locke, Condillac, and Molineux, indeed, once disputed warmly whether a man restored to sight could distinguish a cube from a globe with his eye, although he might have done so by touch when blind. Locke thought that he could not, the fact being that the power of vision, in such cases is extremely faulty, and has to be regularly educated till it gradually becomes accurate and trustworthy. "I can't understand," said a clever blind man, "how things can be *seen* to be round or square, all at once, without passing the fingers over them." And, beyond a doubt, the whole question of seeing is, to a man born blind, more or less of a mystery. Even Saunderson, genius as he was, only got as far as to conceive that "the art of seeing was similar to that of a series of threads being drawn from the distant object to the eye." The cessation of resistance may be to the touch of a blind boy what "the cessation of colour is to the

eye of the seeing;" but it was no mean authority who said, "*Nihil est in intellectu quod non prius fuerit in sensu,*" and the words apply with double force in the present instance. Where, therefore, touch fails him, he can gain little external help, and may presently be altogether at sea. Things apparently identical in form may differ in size, and differing in size, may also totally differ in essence and in nature; and of this difference he may be wholly unconscious. He may form, and does form, the most outrageously incorrect ideas on some common matters, though he may continually amuse and surprise you by clever guesses, or gleams of what seems like intuition. Du Puiseaux, the son of a Professor of Philosophy in the University of Paris, was in some things one of the shrewdest men of his day, having attained considerable proficiency in botany and chemistry; but he was blind. He had a wonderful memory for sounds, and could, it is said, recognise by their voice persons whom he had only once heard. He could tell if he was in a street or a blind alley, in a large room or a small one; but he believed that astronomers were the only people who saw with telescopes, and that they

* Guillié, p. 73.

had their eyes differently formed from other men. Nor was his notion about eyes in general a whit less incorrect. "The eye," said he, "is an organ on which the air should have the same effect as my stick on my hand."* The boy upon whom Cheselden operated for cataract, had clearly been of the same opinion. Even when restored to sight, he believed that the objects he looked on touched his eyes, as those which he felt touched his skin; and he consequently had no true idea of distance. He asked "which was the sense that deceived him, the sight or the touch?"† He wondered how a likeness of his father's face could be got into so small a space as his mother's watch-case; it seemed to him as impossible as getting a bushel into a pint measure. It took him some time to learn to distinguish between the dog and the cat, until he had felt them over carefully with his own hand. It is not to be wondered

* Guillié, p. 56.

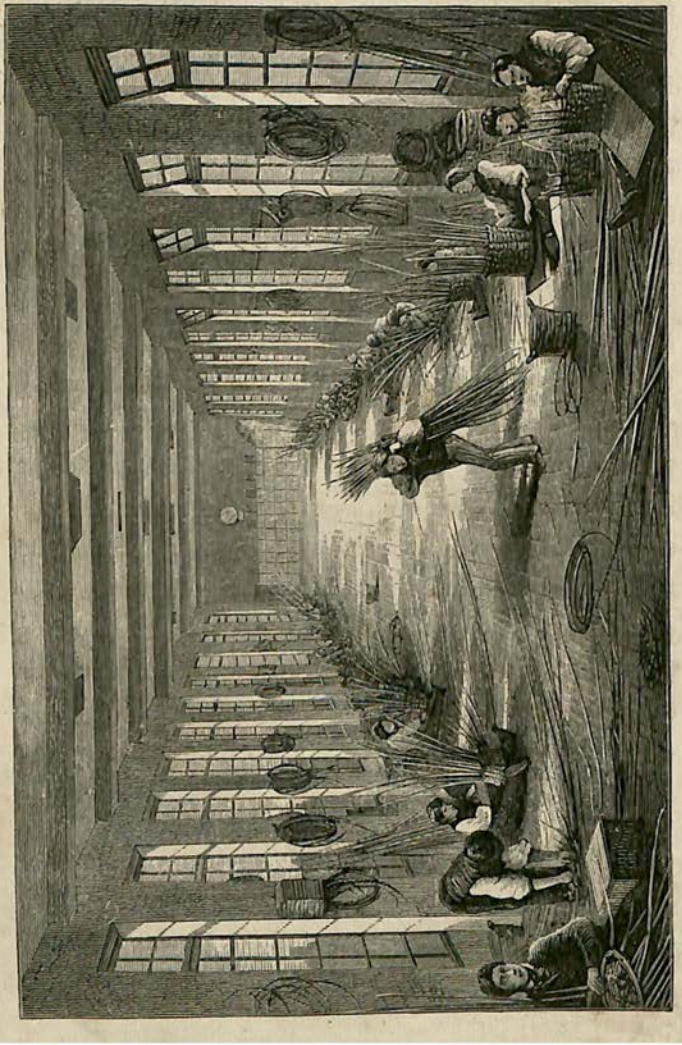
† Speaking of the education of the sense of touch, Sydney Smith whimsically conjectures as to the possibility of educating the taste and smell to an equal degree of keenness. As the blind child feels certain marks raised on paper, which he calls A B C, why should not the alphabet be taught by a series of well-contrived flavours? Why should not men smell out their learning, and why should there not be a fine scenting-day for study?—*Lectures on Moral Philosophy*, p. 62.

at, therefore, that when some one asked Du Puiseaux if he "would not be very glad to have his sight?" he replied, "If it were not for curiosity, I would rather have long arms; it seems to me that my hands would teach me better what is passing in the moon than your eyes or telescopes;* and, besides, the eyes cease to see sooner than the hands to touch. It would therefore be as well to improve the organ I have, as to give me the one I want." Abundant evidence of a similar kind might still be adduced, but this seems enough to prove that even among educated blind people there must be a large section of the physical and metaphysical world of which their idea is to a great extent vague and incorrect. Such must their notions be of space, and wide distance, and, to some extent, of size; of such phrases as "the expanse of ocean," "the broad bosom of the teeming earth," or "the starlit canopy of heaven." It is more than doubtful whether they can form any even tolerably accurate idea of such an object as Salisbury spire.†

* Quite in a different sense, says Shelley, "God has given men arms long enough to reach the stars, if they would only stretch them out."

† "A blind man," says Winslow, "walking through a lofty cathedral is really unconscious of aught about him save the coldness of the air, and the stone pavement."

It would be easy to tire our friend little Johnny's legs by making him mount to the summit of St. Paul's, but amazingly hard when there to give him any true notion of his height above the wilderness of smoky house-tops below. If perched on the top of the cross, like Holman the blind traveller on Adam's Peak in Ceylon, he might exult in his lofty position, and draw in new life from the mighty rush of air about him; but he would be utterly unconscious of the foggy depths all round, and the fearful calamity of a single false step. In the very climax of supreme peril, with all his timidity and nervous fear, he might actually seem fearless; proving once more the old adage, "What the eye doesn't see, the mind doesn't fear;" and reminding us of Blind Metcalf, who planned and made some of the wildest roads across the Peak, and was the safest guide through them to be had for love or money.



THE BASKET-SHOP.

CHAPTER II.

NEXT in importance to the sense of touch comes that of hearing. The blind boy knows the step of his friend in a trice, decides quickly or even instantly which way that step is moving; and, if it be coming towards him, exactly at what angle to run across the room or yard to meet it. He will even distinguish a certain footstep, at times, among others, especially if it be one that he either loves or fears. Let us glance for a moment into the Basket-shop in St. George's Fields. It is a large and lofty room, some 20 feet wide by 150 feet long, and in it are now at work on basket-making full fifty boys and men. There is generally a teacher, with sight, at either end of the room; but one is now just gone to fetch some osiers from another part of the building. Our friend little Trotter is at work halfway down the room, but has met with some trifling difficulty not to be solved

without his teacher's help. The fifty boys and men are almost all talking as they work, or perhaps humming a tune, or beating their work with a bar of iron; and some are crossing the room in search of tools, help, or advice; so that, altogether, the scene is full of noisy life, and as unlike a shop full of blind people as may well be imagined. But, in the midst of all the noise, Trotter sits quietly waiting; he knows that the master went out of the room five minutes ago (*he* will tell you that he *saw* him go), and, though several persons have since come in at that door, he knows that his teacher is not one of the few. All at once he starts up, as the door shuts with a bang—and the pupil walks quickly up the room,* in a direct line, as if he saw the table at which his teacher now sits. As he goes back to his place another person enters by the same door, and makes his way hastily towards the other end; but he has not gone a dozen steps before more than one voice among the basket-makers is heard to whisper, "Here comes the Chaplain," or "There goes Brown."

* If any one with sight imagines this to be an easy matter, let him shut his eyes when 40 yards from, and opposite to, his own door, and make the rest of his journey in the dark. The chances are 1000 to 1 against his arriving anywhere near the well-known threshold.

Or, glance into the same room an hour later, and the whole scene is changed. The bell has rung for leaving off work; but, as it is a wet wintry day, some fifty or sixty of the pupils are here under shelter, walking two-and-two, arm-in-arm, round the room, whistling, chatting, singing, or shouting most uproariously—but all promenading as methodically, and evenly, as if every one there had sight. Not a single boy ever strays out of his rank, no one runs against his neighbour; though, at the first glance, it appears only like a noisy and confused crowd. There are three doors to the shop, one at either end, and one in the centre; every two minutes some boy darts out from the crowd, or rushes in to join it, by that middle door; but in neither case does he jostle friend or foe. Here comes Trotter himself. He is in search of his friend Jones, who, driven in by the rain, left him ten minutes ago at the swing, and is now the solitary unit in the long chain of couples. As tramp by tramp it works its slow way past the door where he stands, Trotter, "with his face all eye,"* watches to pounce on his friend as he goes by. In spite of all the din he hears him when some yards off, seizes on

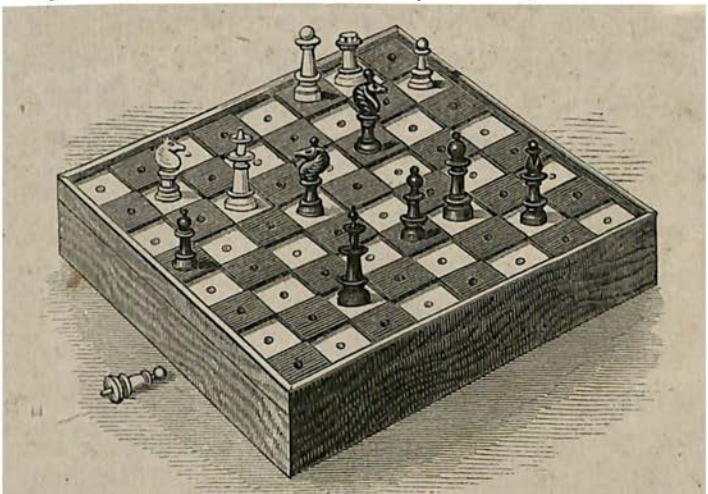
* Coleridge 'Biog. Lit.'

his arm, as if he saw it passing, and away they go, to join steadily in that jolly unbroken march till the glad sound of

"That tocsin of the soul, the dinner bell"

send them flying out into the colonnade to muster for cold beef, bread, and beer. Stand still for a moment, and you will hear the deep roll of their chanted grace, with its pealing Amen; if not quite so smooth and rounded a cadence as it might be, at least with a deal of heart and reality in its final chord. While they are at dinner we will glance into one or two of the work-rooms, now silent and empty enough. This on the left, under the archway, is the Brush-shop, fitted up with a central table and forms, on one side the teacher's bench, and on the others a longer bench cut up into little sections, each fitted with drawers and tools for learners, all precisely as if the workmen had sight. In *this* room are made, entirely by blind boys under a sighted teacher, brushes of almost every possible description. After 6 P.M. this shop serves as a Club-room for the Upper Twenty; here they play chess or draughts, emboss letters to country friends, or now and then, if lucky enough to get hold of a stray teacher, listen to the pages

of some special book. In the drawers of the centre table are now locked up the boards for draughts, bagatelle, or chess; all curious enough in their



THE BLIND BOY'S CHESS-BOARD.

way, but which space will not permit us to do more than mention. A good game of chess will last a month or six weeks.* Work-room No. 2

* Sir Kenelm Digby says, in his 'Treatise on Bodies,' "that his son's tutor, a blind man, could beat the cleverest players of that day."—p. 17; ed. 1660.

A small point on the top of the men *e.g.* ♙ distinguishes for the blind boy his opponent's pieces from his own.

is the Mat-shop, much larger and loftier than No. 1, and fitted with mat-frames and looms, all of the ordinary kind. Here are made rugs, mats, and miles of cocoa-nut matting, of every texture, quality, and pattern. Dainty little mats of the finest wool or fibre, fringed with pink or white for a boudoir, or thick and gigantic enough for Brobdignag; triangular, square, or oblong, to fit into the bottom of a carriage, or the corner of a hall; thin enough for the door to swing over without brushing, or thick enough for the boots of a regiment of Grenadiers.

As we cross the open yard from the mat-shop, the boys and men are coming out from dinner, and at once diverge in all directions; some three or four off to the swings, some to the range of music-rooms above the workshop, in each of which is a piano to be diligently sounded till 6 P.M.; some for a stroll round the grass-plat, and one or two to the club-room; but each and every one going on his way as calmly and clearly as if he saw every inch of it mapped out before him; never running against friend or foe, never stumbling over door-step, and rarely missing the handle of the

door for which he steers. As *we* thread our way, however, through the noisy, straggling crowd, our irregular, unbusiness-like style of march is suddenly interrupted by a shot across the bows in the shape of a loud "holloa!"—as much as to say, "Who goes there? and why don't you look where you're going?" Our best answer to this shot is to stand still until most of the cruisers have swept by; and then—with one more peep into the brush-shop, which, till work begins again at 2 P.M., serves as a sort of house of call—we will quit this part of our subject. Our friend Trotter has just set off in a great hurry for that door-way; he seizes the handle, opens the door hastily, shouts out one or two lusty words, waits for no answer, but rushes off again elsewhere. Ask him what this pantomime means, and he will tell you that he was in quest of a certain trio of boys who promised to meet him there; that he "*looked*" into the club-room and found that they were not there; at least he *thinks* not, as, judging by the sound of his own

* Tom Wilson, the blind bell-ringer of Dumfries, was famous for cleverness of this kind. "His first visit every morning was to the belfry, and on his way to it he tripped up the stone steps as quickly and certainly as if possessed of the keenest sight, key in hand, and rarely missing the keyhole at the first trial."

foot against the form on which they usually sit, and of his own voice, the room seemed empty. And empty it really is. The well known story told by Mr. Anderson of a blind messenger at Edinburgh, entirely corroborates this fact. "I had occasion," he says, "to send out one of two blind men with a mattress. I gave him the bill with it, that he might receive payment. But, to my surprise, he returned with the account and the mattress too. 'I've brought back baith, ye see, Sir,' said he. 'How so?' 'Indeed, Sir, I didna like t' leave 't yonder, else I'm sure we wad ne'er see the siller—there's nae a stick of furniture within the door!' 'How do you come to know that?' 'Oh, Sir, twa taps on the floor wi' my stick soon tell't me that!'" And true enough was the guess; for guess it must still be called, though in both the cases cited it was shrewd enough to pass for wit. The eye itself is educated. "It sees," says Carlyle, "what it brings power to see." Thus, the sailor at the mast-head descries a ship where the landsman sees nothing: the Esquimaux detects a white fox amid white snow; the astronomer a star where others see only an expanse of misty light. The blind boy educates his senses of touch and

hearing into a state of exceeding acuteness, till they almost begin to atone to him for that one which is denied; though, after all, they cannot do for him what a single ray of vision would do by one swift glance. "*It's a long time before you learns to be blind,*" said a shrewd old blind woman. And as the education of the eye in darkness is slow, so also it appears to be even in light, in the few cases of restored sight which are on record. "Light," says De Quincy, "in its final plenitude is calculated to dispel all darkness. But this effect belongs to its consummation. In its earlier and struggling states light does but reveal darkness. No sooner has this early twilight begun to solicit the creative faculties of the eye, than dusky objects with outlines imperfectly defined begin to converge the eye, and strengthen the nascent interest of the spectator. Light thus makes darkness palpable and visible; as in a gloomy glass-house, where the sullen lustre from the furnace does but mass and accumulate the thick darkness in the rear upon which the moving figures are relieved." It is only by dint of long experience, and after an infinite series of mistakes—of many of which he is unconscious—that the blind boy manages to see with his

fingers,* and now and then to do more than hear with his ears; but a shrewd boy of his own age, with a good pair of eyes, will give him twenty or thirty in every hundred yards, and yet win the race. A blind boy's face may be, as Coleridge describes it, "all eye," and learn to beam with brightest intelligence; he may be an apt scholar where many a youngster fails; his remaining senses, if rightly trained, seem, by that merciful law which rules God's kingdom, to put forth new blossom and fruit as every year rolls by, to be gifted with new vigour and keener life, and thus save him from the full pang of knowing all his loss; and yet, the result if tried sharply will too often be found imperfect and incomplete. It has been up-hill work all the way through, accomplished only by incessant and patient toil, by perseverance and unwearied ingenuity, and on this ground admirable and worthy of praise. For though Huber, in spite of the darkness about him, managed to make and to record many striking discoveries in the domestic life of Ants and Bees, he would

* A shop-man in Bokhara had in his shop 16 kinds of tea, all which he distinguished entirely by the touch."—p. 180, *Vámbéry's* 'Central Asia.'

probably have done far more with his own eyes than with those of his faithful servant, or even of his clever and sparkling little wife Marie Lullin.* And had Didymus of Alexandria, the friend of Rufinus and Isidore, A.D. 350, mathematician, linguist, and theologian, not been blind, he would have left behind him far more trace than a slight mention in the pages of his famous pupil St. Jerome. Saunderson would have left behind him some imperishable record of his genius; his manhood would have been saved from many an excess, and his old age have been preserved from the deadly taint of scepticism. John Stanley, the organist of St. Andrew's, Holborn † (1730), to whose playing Handel often listened with delight, would have been known to all England. Blacklock might have written poetry instead of rhyme of the mildest

* *Vide* Life at p. 141.

† So great was Stanley's skill that he is said on one occasion, when the other instruments were too sharp for the organ, to have transposed one of Handel's "Te Deums" into the unusual key of C ♯ major; and that, too, at sight, without time for premeditation. James Strong, a Blind Musician of Carlisle, made every article of his own attire, as well as his household furniture. It was in 1752 that he specially made himself a pair of shoes, and walked from Carlisle to London to hear Stanley play at St. Andrew's.

order, and a host of would-be poets, philosophers, musicians, and prosers, would never have afflicted mankind with various melancholy performances.

So far, therefore, for some of the difficulties and obstacles which blindness entails. It is time now to glance at one or two special advantages which it is commonly supposed to confer. Cut off as the blind man is, in a measure, from the rest of the world, and from many channels of light and information open to others, his isolation is said to give him special power and aptitude for the study of abstract things: of philosophy and of mathematics. And the assertion will, to some extent, hold good. A wounded finger will make a man careful in handling edged tools, he will be more skilful than he was; a man who falls and breaks his leg, walks more warily ever after; but neither wound nor fracture is the cause of skill or safety. So with blindness; it must first be regarded as a loss. It isolates a man, no doubt; when he wishes to think, it saves him from the intrusion of external objects and the busy crowd

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* Guillié, in his 'Essays,' amusingly says of Blacklock, "In England he is considered a great poet."

of ideas which wait about on the world of visible things; it may free him from some illusions of the senses, and the snares of outside appearance; he easily becomes abstracted, where a man with sight would often find it hard: so far, therefore, his way towards deep, inward, thought is cleared; wind and tide seem in his favour. But he must know how to manage the sails, and to steer the ship; he must have clear power of thought, and be trained to use it; be able to concentrate his attention on the given idea, and willing to work at it; or his own peculiar world will steal in upon him—the things which he can handle, taste, and hear; the things which feed his appetites, or gratify his passions; his amusements, pleasures, and regrets; his failures, peculiar sorrows, trials, and disappointments. If the blind boy has courage and moral strength to banish *these* intruders, "the doors of Geometry may open to him on an oily hinge," the fatal "*Pons Asinorum*" may be easily crossed, and the silent domains of metaphysical speculation invite and gratify his careful, inquisitive approach. So acutely has this been felt in every age, and so favourite has the dogma become, that more than one philosopher is said to have plunged himself into darkness

for the very purpose of more intense, abstract, thought. We can readily believe that Malebranche may, with this object, have closed his shutters against the daylight; that Bourdaloue preached eloquently,* or Diderot reasoned acutely, with his eyes shut: this might happen to such ordinary mortals as "Jones" at Clapham thinking out his Sunday sermon, or "Robinson" in Capel Court speculating on the possible contingencies of settling day. Shutters are readily unclosed, eyes are easily opened. But when we read † that Democritus, of Abdera, put out his eyes for the purpose of philosophizing, we begin to doubt. In the first place, Democritus was hardly the man to cut himself totally off from all the sights of folly, show, and care that he rejoiced to laugh at, though a poet has said of him—

> "ad ridendum curas et inania mundi
> Splenis Democritus non satis unus habet."

An hour's darkness he might have chuckled over,

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* "God be praised," said an old woman to Dr. Guyse, her minister, who had suddenly become blind,—"God be praised that your sight is gone. You're more powerful than ever, now ye've no notes."

† Guillié, quoting Diderot, p. 53.

but a lifetime is a totally different thing. Cicero, who is always dragged in as a witness on this point, says nothing to corroborate such a view. His words simply are: "*Democritus impediri etiam animi aciem aspectu oculorum arbitrabatur;*" † clearly meaning nothing more than that Democritus, like any other Abderite philosopher of his day, now and then put up his shutters in the blazing weather, or perhaps dreamed for an hour with his eyes closed. Next we have Diodotus, the Stoic, Cicero's master in philosophy, who, when he became blind, is said to have applied himself to mathematics with greater success than ever, and become famous as a teacher; and this probably because he worked harder in the darkness than in the light. Every year doubtless gave acuteness to his inner sight, keenness to his touch, and possibly eloquence to his words,—yet, not in consequence of his blindness, but in spite of it. So, also, Tiheckius, of Thorndorf, who taught medicine and philosophy with success for thirteen years at Tübingen, and becoming blind in the

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* Milton, who only knew half its bitterness, calls it

"To live half-dead, a living death.'

—*Samson Agonistes*, 39.

† 'Tusc. Disp., v. 39.

fourteenth year, is said to have refused the help of an oculist who offered to restore his sight. Perhaps he knew the oculist to be an impostor, and his sight once gone to be irrecoverable; in any case, he was a humourist, and we can quite believe him when he said, "he had seen many things in his life which he would rather not have seen, and on some occasions had even wished that he were deaf." Which of us, if he spoke truthfully, would not agree with the philosopher of Tübingen? But this is a very different thing from arguing that loss of sight gave him increased skill or wisdom in healing the bodies or minds of his fellow men. The truth is, he was doctor enough to know that his loss was irreparable, and philosopher enough to make the best of it. It was in much the same spirit that Du Puiseaux used to say, "he was always meeting with seeing persons of inferior intelligence to himself."

It has been well said that "the strength that is in a man can only be learnt when he is thrown upon his own resources and left alone;"* and the isolation of the blind man no doubt thus forces

* Robertson's Sermons.

him to make the most of his strength, and brings to the surface, often into living play, his highest and best powers;—but it must not be forgotten that the darkness which isolates him, and saves him from the intrusion of unwelcome images, tends also to narrow the vision which it concentrates. He rarely, if ever, takes a broad view of things. If he thinks intently on any given point, he fails to see, or is apt to forget, some one other of equal weight and close at hand. This makes him one-sided, and ready to hug his own judgment to the very death; slow to receive the opinion of others, captious as well as cautious, a temper which easily hardens into narrow prejudice. These are heavy drawbacks to the supposed advantages of ready abstraction and aptitude for metaphysics. Nor are they to be wondered at, when we consider from what infinite sources of beauty, grace, and truth the blind man is cut off. To him are unknown all the countless evidences of an Almighty hand which to all other men speak from earth, sea, and sky; the smooth and immeasurable expanse of summer seas, the silent grandeur of the blue sky above, with all its wealth of palaces and towers of fleecy cloud, the golden glory of morning, the

gorgeous dying splendour of setting suns, the soft haze of twilight, the solemn watches of starlit night, the living, speaking beauty of the wide-spread landscape,* the flowing sweep of the everlasting hills, the proud, calm majesty of snow-clad mountains, the green and purple outline of the forest, the beauty of waving corn, and the grace of flowers, of sloping valley, and of winding stream,

"And all the thousand sights that crown this earth with joy."

No description can paint these things for the blind man more than words can paint music for the deaf-mute. But even above all these, is the loss to him of all the infinite grace and beauty of the human face. Who shall tell him of the tender love that beams from a mother's eye, or the rippling

* The youth restored to sight by Cheselden when brought to a wide prospect of hill and dale, called it "a new kind of seeing."—*Philosoph. Trans.*

Nothing, indeed, can be more striking or solemn than the first sight of a mountainous country to one used to the sleepy flatness of the plain. The abruptness and audacity of the whole scene, the swelling magnitude of nature, the appearances of convulsion, the magnificent disorder and ruin, astonish a feeling mind: "filling it with grand images, rousing its dormant life, and telling those made orators and poets that it is time to fulfil the noble purpose of their birth."—*Sydney Smith*, 'Lectures,' p. 89.

But to this touching appeal, and to the whole world of kindred associations, the blind man is actually dead.

sunshine that lights up the face of a happy, laughing child? The rosy brightness of the lips that kiss him, of the cheek which offers a ruddy welcome at his coming, the saucy smile of a dimpled chin, or the rapture of sudden joy that beams from every feature? To *him* all this beauty and all this joy are but a darkened, dreary blank. And though he may be unconscious of the greatness of his loss, it is hard to exaggerate the gain—

> "Since light so necessary is to life,
> Nay almost life itself—" *

which light brings to the rest of the world. "There are," says Pascal, "two infinities that lie round about man, the worlds revealed by the telescope and the microscope, and these appeal to the depths of wonder and awe within him; a noble and lofty appeal, of which he who cannot see is utterly unconscious." † It is true that "a life of religion

* 'Samson Agonistes,' 90.

† It is urged, indeed, that Saunderson must have formed most accurate ideas of space, or he could not have reasoned on Geometry as he has done. It is impossible to limit the achievements of such a genius as his, and say exactly what it may or may not do. It is enough to say that there is but one Saunderson on record, and centuries may elapse before we meet with another.

"To the blind man," says Hauy, "the visible world is totally annihilated; he is perfectly conscious of no space but that in which he stands, to which his extremities can reach."

is a life of faith, and faith is that faculty by which man feels the presence of the invisible, exactly as some animals have the power of seeing in the dark;" and it would seem, at first, as if the blind man by his very affliction might be the more open to its power, and thus learn to make "loss his highest gain." But, unhappily, having too often no true knowledge of Light, he has no true knowledge of the darkness which hems him in, nor of the mighty purpose it is meant to serve. It is to him but a cold, hard, dead loss, which, unless he be roused out of the gloom, and taught to find light in it—*in tenebris servare fidem*—may shatter or dwarf his whole mental and spiritual powers, and point the way to doubt, distrust, or denial of Him to whom darkness and light are both alike. It is said to have been so in the case of more than one famous blind man. When Saunderson lay dying he sent for a clergyman, one Dr. Holmes, who seems, however, to have brought him little comfort; so far at least as Diderot's manifestly imperfect account tells what really passed. As death drew nigh, the great shadow which had darkened all the sick man's life grew deeper and darker. He began to doubt,

once more, the existence of his Creator. "If," said he, "you would have me believe in God, I must feel him." "Touch then your own frame," was the reply, "and find God there in His noble handiwork." "All this," said the dying mathematician, "may be very well for *you*, but it is not so for me; what relation is there between his handiwork and God? You call everything you cannot understand a wonder, and therefore divine. I myself am a wonder; people come from all parts of England to see me. Every phenomenon, you say, is from God. Why not have a little less pride, and a little more philosophy in your talk and reasoning?" To this thrust the worthy Doctor seems to have made no adequate reply, but proceeds to set before him the examples of Newton, Leibnitz, and Clarke, men of profound thought and acute reason, who were nevertheless believers in Christianity. "This," replied Saunderson, "is strong evidence, but not strong enough for me; the testimony of Newton cannot be to me what all Nature is to Newton;" a remark which appears to have closed that part of the conversation. But the patient again rallied, and returning to his old vein of thought, rambled off to discuss the present

state of the world. "It is," said he, "I will allow, at present what you describe it to be, a world of order and method, in which certain laws and order hold good and prevail; but, as to the most primitive times, the first beings who then lived may have been utter monsters, without the higher functions, nay, without stomachs, and the universe about them a mere chaos. There are informous things enough in the world even now. For example, I have no eyes; what had either you or I done to God, that one of us should have that organ, and the other be without it?"* As he uttered these sad words, an earnest, solemn, and deep concern spread over his whole face, as if the terrible problem that had haunted him all his life long and received no solution, to the very last was to be unsolved by the dying man. He had, as yet, drawn neither hope nor comfort from the Master's words: "*neither hath this man sinned nor his parents;*" and though he had found for hi hand a great and worthy work, had never learned to do it to a greater glory than his own. As he

* Saunderson's belief in God seems to have been as barren to him as atheism itself; "for it were better to have no opinion of God at all, than such an opinion as is unworthy of Him."—*Bacon.*

grew weaker, his thoughts became more confused, and his words less coherent. He spoke only a intervals, but once again rambled back to the cloudland of doubt, "The world Eternal? so it seems to *you*, as you are eternal to the insect." Again, after a silence—"Time, matter, space, are but a point. I am going whither we must all go. Let there be no lamentation or mourning; it is a pain to me." And then, last of all, came the yet sadder cry of agony, "God of Newton, give me light!" as the shadows were all coming to an end, and the great mystery of life was about to be unlocked in the things unseen and eternal. We must hope that his last despairing cry to the Being, of whose existence he just before seemed to doubt, was heard in the very agony of his need.

The whole picture, even in the words of sneering Diderot, from which it is mainly condensed, is full of touching interest; and though it may perhaps exaggerate the weary clouds which sometimes beset the death-bed of the blind man, it may be taken as a type of what may to some degree befall him if not well-trained in early youth. "The world is too much with" him; and though "heaven," too, "lies round about him in his infancy," he is unconscious of

it. But once rouse him from this unconsciousness, only convince him that he has his place in the world, and that He who gives to kings and beggars alike their place and work, has given work, a place, and ability to him, and the whole scene begins to change. Light begins to steal in—

> "The sense of Power is freedom, warmth, and light;
> The sense of Weakness, gloom and chains and blight.
> The sense of Power is Life's immortal breath;
> The sense of Weakness is the touch of death—" *

and the youth who once fancied that life was but a dreary blank, without hope, meaning, or use, soon —perhaps too soon—appears to think his abilities of the very highest order. In music he will rival Mendelssohn or Mozart, and out-sing Incledon or Braham; in poetry equal Milton; and in the making of baskets vie with the deftest craftsman in Greenhithe.† These amusing little conceits the world soon takes out of him, and by and by the residuum is the very useful and honest amount of self-confidence, without which the keenest sight and the shrewdest ability are too often apt to fail. It is this consciousness of power which inspires genius

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* *Fraser.*

† Greenhithe, the head-quarters of the basket-makers.

itself. It was this which led Milton, smitten down as he was in the full power and flush of his genius, to say in his darkened estate—

> "Yet I argue not
> Against Heaven's hand or will, nor bate a jot
> Of heart, or hope, but still bear up and steer
> Right onward."—*Sonnet to Cyriac Skinner.*

These are the opening words of one of his finest Sonnets, and form one of the few passages in which he alludes to his blindness. The concluding line in another sonnet, which he wrote soon after this—in memory of his wife—

> "I waked, she fled, and day brought back my night,"

leads us to another point immediately connected with the one which we have been discussing, and that is, how the blind man dreams. Milton, of course, having but just lost his sight, dreamed precisely as other

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Blindness befel him in his 42nd year; but he can never rightly be counted a blind man, for his stores of learning were then all laid up, his powers matured, and his genius was all in its pride of strength, though he certainly wrote by far the greater part of his 'Paradise Lost' after his sight was gone. He became totally blind in 1652, and the poem was finished at Chalfont in 1665, where he had taken refuge from the plague. The opening sublime passage on Light, in Book III., proves at least that from Book II. the poem was written in "darkness."

men dream—the remembrance of the visible world being still with him bright and vivid as before; though he himself says—

> "The face was veiled, yet to my fancied sight
> Love, sweetness, goodness, in her person shined."

But into the vision of the blind boy no visible image from the outer world, no shape of beauty, no ghastly form of horror, can possibly enter. Whatever comes to him by night—to him no darker than the day—must come by touch or hearing. "I dream," said a blind boy, "I often dream about people; I dream of my brother (also blind); I know he is with me, I hear his voice; I am in the places where we used to go before he died." "But how do you know that you are in a certain place?" "The impression of the place is with me—I feel I am there; *I am sure* I am, sometimes, till I wake. Sometimes I dream that I am walking in the fields; I tread on the grass, I smell the fresh air." "If I dream," said another young man, "that I am in the great basket-shop, I know I am there by the size of the room—the length of it." "But how can you judge as to the size or length of what you cannot see?" "Oh! the sound tells me pretty well; I am in my own old place, where I work." "You sit on your box, then?" "Yes,

I touch it, and if the dream goes on I get my tools out." "When I dream," says a blind tramper, "it's just the same as I am now, I dream of hearing and touching. The last dream I had was about a blind man that's in prison just now. I went into his wife's house; I knew it was hers by the sound of my foot in it, and whether it was clean or dirty. As we sat talking *I* heard a voice at the door, and I said, 'Bless me,—isn't that John?' But *she* took no notice. 'Holloa! I said, is that you?'—and *I took* him by the sleeve; it was his shirt-sleeves I felt, and I was half afeard of him, and surprised that he should be out weeks before his time. Then (in my dream) I dreamt that he tried to frighten me, and make believe he was a ghost, by *pushing me down sideways*, &c., &c., after that I waked and heard no more." Here, again, even in his sleep, the sense of touch is his chief agent, motive power, and detective; and the hapless blind youth, whose powers of hearing and touch are only half-cultivated, or have been left to perish by neglect, is often counted little better than an idiot when awake, while his fancy remains unstirred even by a dream when asleep.

The dream, in fact, is but a hard, bare, and indistinct fragment of everyday life, untouched by a

gleam of fancy or imagination; in both of which qualities the great majority * of the blind are evidently deficient. The things which the seeing can touch, hear, or taste, are comparatively few in number, and do little to feed the fancy or to rouse the imagination; and yet on these alone the great mass of the uneducated blind have mainly to depend. The world of books is all but closed to them; friends are few, and readers are still more rare. The experience, therefore, of a blind man must be more or less grounded on faith—faith in many things which he can realize but imperfectly, and in some of which he can form no conception. And this, again, tends to harden and petrify the whole tone and habit of his daily life. If, as in the case of Blacklock, he has a turn for versifying, he may produce in abundance feeble imitations of such popular poets as may chance

* It must not be forgotten that all general remarks of this kind apply only to those who are born blind, or lose their sight in early childhood. Mr. Frantz tells us of a youth whose sight was restored by an operation. While blind he often dreamed of his parents; he felt them, and heard their voices, but never saw them; but when once he had seen them with the bodily eye, he beheld them also in his dreams.—*Philosophical Trans.*, 1841.

"I never dream of my mother," said a blind man to Mayhew (i. 402); "she died, you see, when I was a baby; I can't ever remember hearing her speak."

to be read to him, catching here and there a phrase, a cadence, or an echo of the metre; but for the most part what he writes is absolutely without salt, colourless to the mental eye, and tasteless to the critical palate. He may have certain ideas of warmth, sound, and society as belonging to "the day;" of silence, solitude, and melancholy as connected with night; he may talk of "glory" as belonging to the sun, and "fainter radiance" to the moon. But this, after all, is no proof that he understands the images which he uses, any more than Blacklock did when he assigned "paleness" to grief, "cheerfulness" to green, or chattered of "ruddy" gems and "glowing" roses. He uses such words and phrases pretty much as the school-boy does the adj. "*purpureus*," which he hunts out of his Gradus as a jolly epithet for "*Olor*," and "*purpureum*" for "*Mare;*" never perhaps having seen any but *white* swans or *green* waves; and possibly never having had a glimpse of either. A single specimen from Blacklock's loftiest poem will more than suffice to show our meaning:—

"Arise, my soul! on wings seraphic rise,
And praise the Almighty Sovereign of the skies,
In whom alone essential glory shines,
Which not the heaven of heavens, nor boundless space
confines.

When darkness ruled with universal sway,
He spoke, and kindled up the blaze of day;
First, fairest offspring of the omnific word,
Which like a garment clothed its Sovereign Lord,
On liquid air he bade the columns rise,
That prop the starry concave of the skies," &c. &c.

This is cited by his critics,* themselves blind, as something quite Miltonic, "truly sublime," and full of "bewitching beauties." So much for his poetry. But Blacklock is also claimed as a philosopher; and what his philosophical attainments must have been may be easily imagined from his poetical description of Aristotle:—

"The Stagyrite whose fruitful quill
O'er free-born nature lords it still,
Sustained by form and phrase
Of dire portent and solemn sound,
Where meaning seldom can be found,
From me shall gain no praise."

This choice stanza is from his poem entitled 'Refinements in Metaphysical Philosophy,' and is supposed—though it is hard to conceive why—to be in the style of 'English Bards and Scotch Reviewers,' with all Byron's wit and none of his bitterness! Nor

* James Wilson, clever and ingenious as he is, and one Mr. B. Bowen, who dates from New York in 'A Blind Man's Offering' of prose and verse: all very sad stuff.

can we find anything more encouraging in recent versification by the blind. Such lines, in fact, serve but to show that there is, after all, as much difference between real poetry and mere verse, as between the smell of a flower-garden and of a perfumer's shop. Even Miss Brown, of Stranorlar, one of the most accomplished of modern blind authors, when she attempts verse, though she has far more real poetic feeling than Blacklock, here and there falls into little inaccuracies to which the Blind are always liable, as where she writes—

> "The lofty palm and cedar blent
> Their shadows over Jacob's tent;"

unconscious, apparently, that trees of so widely different a habitat could never unite to throw their shadow on any tent. No doubt any versifier with eyes might, through ignorance, fall into a similar error; but no one who could write such poetry as Miss Brown's, because his education would have saved him from such imperfect knowledge. His acquaintance with geography and natural history would have been of a completer and more practical kind, simply because he had not to depend on other people's eyes and good will for its acquirement,—as must happen in the case of the blind poetess.

The paucity of books—books "in which lies the soul of the whole past time"—which the blind man can read for himself, and the difficulty of obtaining knowledge from the reading of others must always—but in rare, exceptional cases—make his range of knowledge imperfect. There must, too, always remain some subjects altogether beyond his ken, the inevitable consequence of his privation. "Blacklock," says Dr. Kitto, "speaks of day and night, light and darkness, view and sight; of the sun; and of the flashing, gleaming, glowing, and blazing, or soaring of different objects; some in a literal way, others in a more metaphorical sense. His general notion of '*day*' is that of an 'unknown something that is lively and joyous;' but its distinguishing joy—that *we* have in seeing the light, and all the countless objects that are brought into perception, or crowned with fresh beauty, by it alone—he can only talk of as he does of the joy of heaven, which it hath not entered man's heart to conceive. His idea of night is simply of gloom and melancholy, and he himself joins '*night*' and '*hell*' together." "Sight ranks far above all the rest of the senses in dignity;" and not only in dignity, but in power; and through its one golden channel the poet often draws his happiest

inspiration. From this spring of inspiration the blind are for ever debarred. No wonder, therefore, that their poetry is, on the whole, such as it is.

But if the blind boy cannot write poetry, he can learn it by heart; for his memory, when cultivated, is peculiarly retentive, and in all books on Blindness is spoken of as possessing far more than ordinary power. "The memory of the blind," says Guillié, "is prodigious;"* and he rightly traces much of its power to the habit of preciseness and order which many attain when roused to the work of education. He gives us, indeed, no instances of famous memories from the Annals of Blind Men, but rambles off to talk of Seneca, who says—speaking of himself—that he could repeat two thousand detached words in the same order that they held when read over to him;

* Many instances might be cited in proof of the accuracy of a blind man's memory when applied to other subjects. "When I was a young man," says a director of the Great Malvern Museum, 'for many years I hunted in vain to kill a *common* dotterel, which Pennant, the great naturalist, said ought to be called '*uncommon*.' But at last I shot one, and sent to him. I never saw the famous old man again for upwards of thirty years, and long after he had become blind. Meeting him, then, by accident, 'I can hardly hope,' I said, 'that you will remember me, Mr. Pennant?' For a moment the blind man hesitated, and then cried out with sudden eagerness, '*Ah! my friend of the dotterel.*'"—*Colquhoun*, p. 233.

and of a Corsican, who could master even three thousand words, Greek, Latin, or Barbarian, sense or nonsense, and repeat them either backwards or forwards after once hearing them read—for which we have the authority of Muretus. But, whether these be Munchausenic feats, and whether the Japanese savages at Yeddo have, according to Father Charlevoix, their public records committed to memory by chosen blind men, or not, there is no doubt that their peculiar isolation gives both strength, readiness, and accuracy to their memorial powers. Gossipping old Bishop Burnet tells of his meeting at Schaffhausen with a Miss Walkier,* who had mastered five languages and knew all the Psalms and New Testament by heart; and there is no doubt that the case is a genuine one; for a large number of the pupils in St. George's Fields during their six years' stay manage to learn the Psalter, and there is at this time among them a young man who can repeat not only the whole of the hundred and fifty Prayer-Book psalms, and a large number of metrical psalms and hymns, as well as a considerable amount of modern poetry, including Goldsmith's 'Deserted Village,' but—incredible as it may seem—the whole of Milton's

* Burnet's 'Travels,' i. p. 218.

'Paradise Lost,' with marginal notes and a biography! Few blind persons, and still fewer with sight, could accomplish so herculean a task as this, simply because few if any would set to work for years with such incessant, unwearied application and love for the task, as he did. Such was his dexterity, and so retentive was his memory at last, that he could easily learn a hundred lines of Milton in little more than an hour and a half—a period which barely admits of their being read aloud twice, and allowing little time for getting up the lesson. This, no doubt, is a case of remarkable proficiency; but it is more than probable that similar cases are to be found in other schools, both at home and in America, where the education of the blind is carried on with an amazing amount of noisy vigour,*

* *Vide* 'Report of Pennyslvanian Blind School for 1855,' where the manager complacently contrasts the American school with that in St. George's Fields, "and cannot help pointing out with pride the list of subjects taught in our institution, and contrasting their teaching to read, write, and cipher, and to understand their Bible, with our orthography, reading, writing, arithmetic (mental and on slates), geography, maps and globe, history, United States and general, synonymes (*sic*), rhetoric, natural history, philosophy, astronomy, algebra, geometry, trigonometry, physiology, moral and mental philosophy, geology, and biblical literature."

How many of the points in this long array are unsuited for poor blind children, or beyond their reach, Mr. Dunglison does not tell us.

if no better symptoms of real work; and what Daniel Brown has achieved may to a certain extent be done, and is done, by his fellow-sufferers elsewhere. It must be remembered, too, that the blind youth is compelled to derive nearly all his knowledge from books that are read to him (his embossed books being very few in number, very expensive, and almost entirely on religious subjects). While his friend reads, he listens most intently; he is now all ear—not a word, not a syllable, escapes him. He cuts off every channel of communication with the outer world, and opens but the one inlet to the wave of sound. Much depends, of course, on the fluency and distinctness of his teacher, but far more on his own habit of fixed and undivided attention. Here, in the mere task of learning by heart, he has to listen acutely and patiently to all—even to every word—and this by dint of practice becomes comparatively easy. When he comes to the facts and dates of History, he learns to sift the chaff from the wheat, and burdens his memory only with the important items worth retaining, content "to let the little fishes slip through the meshes of the net, provided the big ones be retained," acting on the witty old Fuller's advice, "Make not so faithful a servant a slave. Remember,

Atlas was weary. Have as much reason as a camel, and rise when thou hast thy full load. Memory is like a purse, if it be over full, that it cannot shut, all will drop out." In this way he rouses, vivifies, and strengthens his memory—culling a flower here, or perhaps a weed there—adding gradually yet surely to his store, and at last reaping the certain fruit of all honest toil; not because his powers of memory are keener or stronger than those of seeing men, but because he has spared neither time nor labour to put them to their utmost and best exertion. He labours under a host of disadvantages. No local association can help him, as it does every other student; no memoranda can be consulted; not one single fact can be recalled by the presence of any one person, or by the sight of a place. Yet, in spite of these difficulties, an educated blind man will acquire a knowledge of ancient and modern history, as well as of modern literature; and a glance at the late Lord Cranborne's 'Essays'* will show how wide and how accurate that acquaintance may be. This volume

* Lord Cranborne, the eldest son of the Marquis of Salisbury, was cut off, after a few hours' illness, in the prime of life; a deep loss not only to many attached personal friends, but specially to the blind, whose interests were ever near his heart. Ob. June, 1865.

deserves notice because the author was one of the few educated blind men in England who have of late years printed anything. There was, indeed, a brilliant little sketch written in 1861 by a gentleman well known in Hertfordshire, entitled 'How a Blind man saw The Great Exhibition;' but the author, devoting himself almost entirely to reading, and to music in which he is a masterly proficient, to the regret of his friends rarely uses his pen. With these exceptions, there is little trace of literary work done by blind men of late years, except a volume or two of dreary vapid rhyme, or of querulous, discontented repining at the neglect with which the authors have been treated. Dr. Bull, whose work on Blindness has been already quoted, was a physician in good practice when he lost his sight, and therefore does not fall within our list. Prescott is no exception, because, although his gradually failing sight at last ended in almost total blindness, he was an educated man before his trouble befel him, and then nobly toiled on in spite of it. Nor is Mr. Fawcett, the present Professor of Political Economy at Cambridge, whose stores of learning, like Milton's, were mainly laid up before he lost his sight in the following singular manner. "On the 17th September, 1858, he

was enjoying the sport of partridge-shooting on some land in the occupation of his father, when two stray shots from the gun of Mr. Fawcett, sen., who was with him, happened to strike his face, and, singular as it may appear, the centre of each eye was pierced. Instantaneous blindness followed as a matter of course; in fact, the eyes were completely destroyed. The accident happened on a spot overlooking Salisbury Cathedral, and thus Mr. Fawcett's last glimpse of the outside world embraced a view of his native place. Stunned by the crushing weight of the unexpected blow, the sudden downfall of all his hopes and aspirations, it is not to be wondered at that at first he should have felt extremely despondent. But this feeling was not destined to last long. Neither his general health nor his vigour of mind had been affected by the results of the accident, and before many weeks had elapsed Mr. Fawcett had returned to Cambridge, where he began systematically studying political economy, and afterwards won all his honours." *

There are, doubtless, other blind men of known rank and education, fully entitled to take a place

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* Cassell's 'Portraits of Remarkable Men.'

among those above named; and there are, of course, scattered through England a much larger number well known by their friends to be possessed of like attainments. These form a separate and distinct body, apart by themselves, and to them our general remarks do not apply. They owe their position, as educated men, to special circumstances; to the possession of real genius and untiring perseverance,* or to the appliances and resources which wealth bestows; and, above all, perhaps, in many cases to the great blessing of a mother's fostering hand. If a right-minded Englishwoman of intellect once determines that her blind boy shall take his place in the world as an educated gentleman, and he have within him a spark of kindly genius to work on, no matter what the difficulties of the task, they will be overcome, and her son will grow up to reward and bless her labour. But out of the 30,000 blind people in Great Britain, a very large proportion belong to the middle and lower classes, where there are indeed many mothers

* "Genius," says Helvetius, "is nothing but undivided attention. The power of applying attention steadily and undividedly to a single object is the sure mark of a superior genius. – *Winslow's* 'Obscure Diseases of the Brain,' p. 301.

And so the proverb holds good, "An ounce of *genius* is worth a pound of *clever*."

of shrewd wit and loving hearts, who have all the wish but none of the power to educate the blind child, and where also, as statistics tell us, blindness specially prevails because smallpox and fever go hand in hand with impure air and scanty food; and many a little one whom disease spares, some chance blow from a stick or a stone, a sudden fall, cold, exposure, or neglect, dooms to life-long darkness. Some of the accidental causes recorded are singular, and such as no foresight could have prevented. A was peeping through a key-hole, when her father thrust a wire through the opening and pierced one eye, and the sight of the other soon perished; B ran up against another boy in the street; C fell while carrying a basin, and the broken china cut open both eyes; D was watching a threshing-machine, when a morsel of some acrid weed was blown into his eye; E was hedging, when a thorn pricked him; F was beating for game, when a bough struck him in the face. The 30,000 are scattered over Great Britain very unequally; in England and Wales the ratio of blind to the seeing is 1 in 1037; Scotland gives 1 in 1086; Ireland 1 in 843; the Channel Islands 1 in 728. Blindness is far more prevalent in rural districts than in those devoted to manufacturing and

mining. In Wilts, Dorset, Devon, and Cornwall the ratio is 1 in 793; but in the Eastern Counties 1 in 902; in Cheshire and Lancashire, 1 in 1253; in Bedfordshire, where the young people are chiefly busied in straw-plaiting, it falls to 1 in 1325; while in Herefordshire, with its noble woods, rivers, mountains, and valleys, it suddenly rises to 1 in 693. The Registrar-General endeavours to account for some of these differences in statistics by saying that the rural districts contain a larger number of persons in advanced life than in towns and manufacturing districts; while the young and healthy migrate into the manufacturing districts as apprentices, artisans, and servants. This is not quite a sufficient cause for the great difference of ratio; but the increased number of blind people in Ireland since 1851 (though before that date she had been visited by several fierce outbreaks of epidemic ophthalmia) is clearly explained by the fact that while the population in the ten years (1851-1861) has lost 750,000, chiefly from emigration, blindness, which cannot emigrate, has kept to its usual proportion of victims; and the ratio is now 1 in 843, higher in fact than in any other part of Great Britain, except the Channel Islands, where coarse and scanty food, dirt, and defiance of all sani-

tary laws among the poorer classes, are bearing their usual deadly fruit. During and after the potato failure and the famine, ophthalmia again made its appearance in Ireland, not only among the peasantry in their wretched cabins, but among the masses of helpless children in the Irish rags and Irish dirt of crowded Irish workhouses. The disease soon grew to an epidemic, and attacked even regiments of well-fed, healthy, soldiers, who had been brought into the pestilential air. In 1860 there were as many as 5400 cases of ophthalmia among these hapless children; a dreary and fatal harvest, which Dr. Wilde attributes to "the crowding together of multitudes of badly-fed children in ill-ventilated, unsewered, temporary refuges,"* to the general want of cleanliness among the people, as well as their apathy and indifference with regard to disease. If statistics, always treacherous in matters of age, can be trusted, it seems that out of the 20,000 blind persons in England, about one-seventh are under twenty years of age;†

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* 'On the Number and Condition of the Blind in Ireland.' An able paper read by W. R. Wilde, M.D., before the *Congrès International de Bienfaisance* in 1862.

† The statistics of blindness in England are of the scantiest kind; in America, in spite of all the horrors of civil war, they

a large number of whom must be of the right age to enter a blind school. Yet of these, only 760 are now actually under instruction, and the thirteen existing Schools provide accommodation only for about a thousand pupils. The schools are scattered over England in a strangely defective ratio, as a couple of examples from the Census will show. In the wide-spread county of York, with its population of 2,000,000, and 2630 blind persons (of whom at least 260 are under 20 years), there is but one school for 65 children; while in the South-Midland and Welsh divisions, with a population of 2,600,000, and 2630 blind people, there is neither school nor asylum. The list of schools, as the Registrar gives them, is as follows:— London (2), Brighton, Norwich, Exeter, Bath, Bris-

manage to be more explicit.—*Report of Pennsylvanian Blind School*, 1865.

Ages.	Whites.	Free Coloured.	Slaves.	Total.
Under 10 ..	763	21	111	895
10 to 20 ..	1,494	30	124	1,648
20 ,, 40 ..	2,381	55	250	2,686
40 ,, 50 ..	1,202	46	172	1,420
50 ,, 60 ..	1,227	60	154	1,441
Over 60 ..	3,644	202	699	4,545
Total ..	10,711	414	1,510	12,635

tol, Birmingham, Nottingham, Liverpool (2), Manchester, York, Newcastle-on-Tyne; to which must be added two small but flourishing schools at Plymouth and Devonport, as well as the Manufactory for the Blind, employing twenty-nine workers, at an average of about 7*s.* per week. The earliest of these was founded at Liverpool, in the year 1791; then came Edinburgh and Bristol; and next, in 1799, the School for the Indigent Blind, in St. George's Fields, the largest in England, and in point of education, mental, moral, and industrial, to be fairly taken as a type of what can be, and ought to be, done for blind children of that class. In some of the other schools a greater stress seems to be laid on the industrial work, and in one or two, work in the school-room seems to be almost omitted. But industrial work alone, without mental instruction, will have even a worse effect on a blind boy than on one with eyes. It will slowly and gradually tend to degrade him to a mere working machine; whereas, the grand object is to prevent this degradation, to lessen in every possible way his isolation, to bind him fast to the rest of the world by every tie of community of feeling; as far as may be by community of knowledge, thought, and action; and to crown the whole work with the happy truth,

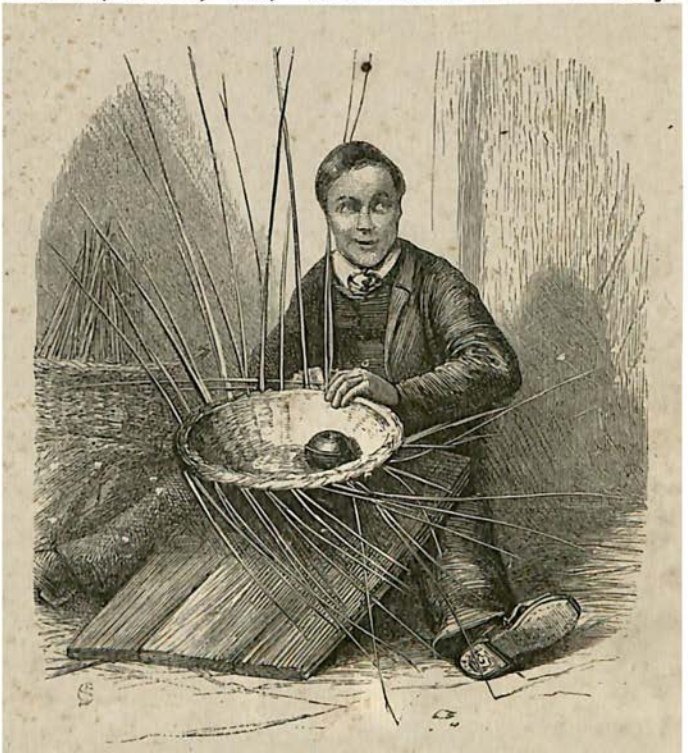
that all are the children of one Father, to whom He has given each his own toil, capacity, place, and reward. No exact rule as to the precise proportion of mental to industrial work, in all cases, can be laid down. Much must depend on the ages of the pupils, the number of teachers and of scholars, as well as the variety of work. But the two occupations should act and re-act on each other; the making of a mat or a basket be a relief after the horrors of Long Division, or the toil of embossing; and a chapter of English History, of St. Mark, or Robinson Crusoe, give spirit to the busy craftsman at his manual work; and that of course, in addition to the daily Chapel service in which he takes a vital part, as well as to more direct moral or religious class-teaching. It would be quite possible to enlarge the strictly educational part of the work at the expense of the industrial; to teach, as in Pennsylvania, a smattering, or even more, of a great many things never really understood, and therefore of little or no real value. But this would be to lose sight of the main idea with which such schools are founded, viz., to enable the scholars in after life to do something towards their own maintenance by manual labour, to teach them to read their Bibles with understanding, and to acquire habits of diligence, truth,

and honesty. This, of course, applies to the class of blind persons who, otherwise, would probably get no instruction at all but such as idle hands find—perhaps behind a dog in the streets—more degrading even than ignorance itself. The industrial work of the girls and women in the above school consists of knitting, netting, and crochet work of almost every variety; the manufacture of silk purses, sash-line, and window-cord, fancy hair-work of a most beautiful and perfect kind, and drawing the hair for brush-makers. But all these occupations are taught and carried on much as with ordinary workers; and therefore need no special description.

CHAPTER III.

THE twelve chief Blind Schools in England at present will accommodate little more than 900 of the 2700 said to be under twenty years of age; and even this limited accommodation is not always put to its full test; for on the day of the census, April 8, 1861, only 760 were found to be under instruction in public institutions. The precise cause of this slackness in availing themselves of the chance of instruction it is difficult to ascertain; the expense of getting a child into one of the schools is small, and in most cases the education is free; so that apathy, neglect, and poverty are probably the greatest obstacles. Of those blind people above twenty years old, able and willing and having need to work, about 2350 are employed in general occupations, and chiefly among those who have sight, as

labourers, miners, farmers (340), blacksmiths, shoemakers, tailors, &c.;* while about 700 men carry



BLIND BASKET-MAKER.

* Here and there in lonely places, no doubt, scattered through England, is to be found many a blind man, steadily and happily at work, though far beyond the reach of the census. Of such an one

on with greater success the more special work of blind men, as basket-makers, makers of mats, rope, and sacks, brushes, and brooms. Of the women, 200 are employed as domestic servants; for though a blind girl would hardly be a safe or efficient cook, she can, as experience has shown in many of the schools, be a first-rate hand at a broom, do all a housemaid's work (when the geography of the house is once known), make the beds, lay the dinner and breakfast-table, shake the carpets, and help at the washing-tub; about 100 work as dressmakers and seamstresses, a point which, incredible as it may seem, is corroborated by the fact that almost all the linen garments worn by the girls in St. George's School are made by themselves. It is corroborated, too, by Hall the Arctic Voyager, who in his 'Life among the Esquimaux' tells us of a poor Blind George (*Paulooyer*) who made all his own sealskin clothes; whose way of threading

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Mr. Colquhoun tells us in his pleasant 'Sporting Days in the Highlands,' "Sunning himself close to the spring, a man stone-blind was making pirn-lines in the most dexterous manner I ever saw.' I bought a trout-line of him, and a neat 'cogue' to water the pony with from the roadside burns. He supports himself, in comfort, here in this lonely Highland glen."—*Colquhoun*, p. 194.

his needle was most amusing. "He took the eye of it between his teeth, bringing the needle into proper position, and letting it rest on his tongue. He next brought the end of his thread towards the eye of the needle, and with the tip of his tongue in some way or other managed to thread it. I have seen him do it scores of times." * The remaining 400 get a scanty living as makers of stays, knitted stockings, baskets, and brooms—doubly scanty because the beggarly pittance paid as wages to women with sight who work at these trades is, in their case, even lessened on the false plea that the work of the blind *cannot* be equal to that of the seeing.

Thus we have a poor and industrious class of about 4800 who resolutely hold themselves above the degradation of begging in the streets, and in spite of all obstacles do their best to keep the wolf from the door. Of the stratum below these, who make begging their regular profession, and haunt the streets of London in every variety of miserable destitution and whining imposture, the census says nothing. They amount perhaps to many

* Hall's 'Esquimaux,' p. 69.

hundreds in number, and are for the most part well known to each other, and to some of their fraternity

BLIND BRUSH-MAKER.

in the provinces. The most skilful in their profession of course find the best market for their talents in the great metropolis, of whom a tall,

upright young man in rusty black clothes and kid gloves is probably one of the most successful. He, as many of our readers must remember, often plants himself with his back firmly against the wall at the foot of the National Gallery, or in some other great thoroughfare, and appeals to the ceaseless multitude as they pass, either silently or, in pleasant, sunny weather, in a short discourse, flavoured with religious phraseology of a highly unctuous kind, but mainly consisting of his own reflections on things in general. He wears hung round his neck a small, neat, placard, informing us that he has been "respectably brought up and educated, but driven by dire necessity to appeal to the bowels of compassion," &c. &c. &c. In fine weather he probably makes his four or five shillings a day, and, not keeping any canine establishment, and only an occasional human guide when venturing on an unknown district, can live in comparative clover. "Here I stands," says one of these professionals, "and often feels as if half asleep or half dreaming. No one does better than I do, because I sticks to it; and it's sometimes 12 o'clock at night before I leaves the streets. I feeds my dog well, but only two meals a day. I never has no amusement;

always out here, wet or dry, except on Sundays." The lower grade of performers, far below him as artists, is sufficiently represented by a few well-known examples, such as the stout, elderly, good-natured looking man who sits in one of the recesses of Waterloo Bridge, and professes to be reading, in a loud, strong voice, some page of St. Paul, in Frere's system. Whether he *is* reading it or not is entirely another question. At all events, he has learned a good many pages by heart most correctly; and so reads on glibly enough in all weathers, rain, east wind, or snow, when the finger of an unprofessional blind boy would be utterly disabled. "I make," says one blind reader of this class, "about 2*s.* 6*d.* a week in the streets. On Whit-Monday I made only two pence halfpenny, though I read till I was hoarse for it; and I counted about 2000 people that passed without giving me a single copper." Next come such as the blind fiddler who haunts the Royal Exchange—

> "Full of strange, earth-born, wiry sounds,
> And cunning trick of bow"—

then, the youth who blows into a tin flageolet one long, crazy, attempt at a tune which he never finds; the three young, unkempt, grimy minstrels who,

linked together arm in arm, sing alternately snatches of funereal psalmody and 'Old Dog Tray' as a trio;* the soldier without a hat, who invokes blessings on all passers by that have eyes, and especially on those who remember the defenders of old England; another hatless sufferer, a big-faced, tall fellow in a white smock-frock, who boldly steers his way along the most crowded pavement under the guidance of a sturdy bulldog;† the whining outcast, near St. Giles', Endell-street, who is one day silent and still as a blind and deaf mute, and the next day moaning and shaking with St. Vitus's dance; and lastly, the old, red-haired, freckled Scotchman, who, under the inspiration of a frowsy old woman, expends himself with desperate energy on a hopeless clarionet, with absolute and hideous success. Nor must one ingenious performer be omitted, who when his front teeth were worn

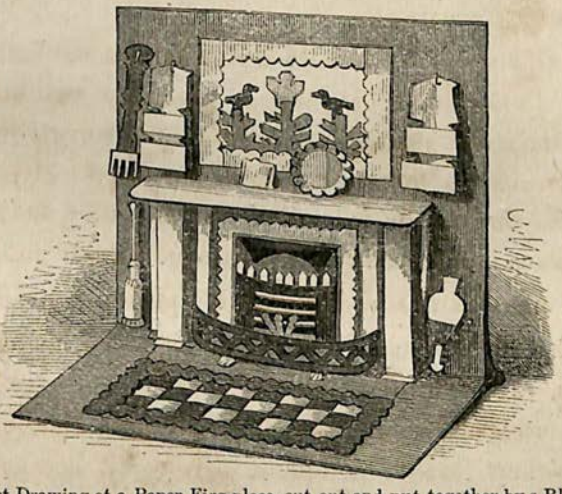
* These three were at Brighton in August, 1865, and were making about 10s. a day.

† Grant in his 'Walk across Africa,' met with many blind people. One blind man visited a certain village periodically, without a dog, knowing every turn in the village, and being everywhere welcome. "He used to stand in the moonlight for hours together, with crowds of men and women about him, and among them the Sultan; and all joining in a chorus of devotional music."—p. 83.

away by the constant friction of the mouth-piece of his clarionet, contrived to make himself out of one piece of bone a new set, which by dint of filing and drilling a hole through them, he still manages to fix in his mouth, and make do their proper work of mastication.

Of such as these there are probably some hundreds in London dragging on a miserable existence in a mixture of want, extravagance, privation, and dirt. Then, far above these dreary spectacles, come the blind adults belonging to the middle and upper classes, among whom are 43 clergymen and ministers, 17 physicians and surgeons, 11 barristers and solicitors, as well as 32 officers in the army and navy; all of whom have probably become blind after entering on a profession; besides 80 described as teachers, many no doubt driven by necessity to embrace pedagogy for a living; and 600 musicians and teachers of music. Eighty-eight old "salts" have, after long years of service afloat, found a quiet haven in Greenwich Hospital, and about an equal number of rivals on shore are Chelsea pensioners. How far the Clergy, Barristers, and Physicians are still able to carry on their professional duties we have no data to help us to decide; though we are

aware of more than one clergyman in the neighbourhood of London still most efficient in the desk and pulpit. Almost all parochial work of course is out of the question.



Exact Drawing of a Paper Fire-place, cut out and put together by a Blind Woman, ætat. 60, who lost her sight when a few weeks old.

CHAPTER IV.

THE great passion, however, in the life of a Blind man once roused to work is Music.* Here he thinks he can achieve, if not immortality, at least renown and certain independence. It is to him a source of the highest, purest, pleasure, a solace under all his troubles, almost light in his darkness. It rightly occupies a considerable place in the School before noticed; and the surprising efficiency there attained is sufficiently proved by public concerts, at which sacred music, vocal and instrumental, of the highest class, is performed by a large blind choir, under the guidance of a blind organist; as may be seen by a glance at one of their ordinary programmes.

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* "It is our only enjoyment," said a blind tramper; "we all likes it."

Programme.

SELECTION OF SACRED MUSIC,

PERFORMED BY THE PUPILS ON WEDNESDAY, OCTOBER 17, 1866,

With full Choir and Organ.

PART I.

1.	Organ Fugue	*Sebastian Bach.*
2.	Harvest Anthem	*Callcott.*
3.	Duet: 'Come over-smiling liberty' ..	*Handel.*
4.	Chorus: 'Lead On'	"
5.	Anthem: 'Praise the Lord'	*Hayes.*
6.	'When the Storms of Life' (*Trio*)	*Sarti.*
7.	'I will give Thanks' (*Motett*)	*Mozart.*

PART II.

8.	Organ Voluntary	*Mendelssohn.*
9.	Te Deum in G	*Cooke.*
10.	Air: 'Father of Heaven'	*Handel.*
	From 'The Creation.'	*Haydn.*
11.	Air and Chorus: 'The Marvellous Works'	"
12.	Chorus: 'Achieved is the glorious Work' ..	"
13.	Air: 'With Verdure clad'	"
14.	Chorus: 'The Heavens are telling' ..	"

SECULAR MUSIC BY THE INSTRUMENTAL BAND OF THIRTY PERFORMERS.

Selections from Offenbach, Meyerbeer, and Schubert.

And though many blind men never go beyond a certain amount of proficiency; yet, to guide and ac-

company an intelligent choir through an ordinary service and simple anthem, or the chanting of the Psalms,—they are quite able, and able to do it well; and this, and even more than this, they do, in turn, in their own solemn and striking Chapel service. But, unfortunately for the blind musician, churchwardens and trustees in want of an organist are slow to believe in his powers, no matter how well attested; and in not a few cases, though his love for it still continues deep and unbroken as ever, once outside the school-gates his practical acquaintance with good music is over; or, possibly, limited to such wooden strains as can be pounded out of some excruciating instrument which Mozart himself could not make endurable.

Among the mural tablets of the ancient Egyptians, so Kitto tells us, out of the few which exhibit character, or can inspire emotion, is one from the tombs of Alabastron representing a blind harper sitting crosslegged on the ground, attended by seven other blind men similarly seated, who sing and beat time with their hands. They were clearly professional musicians, full of animation and interest in their work; and expressing by every feature of the face, as well as their very position, their

darkened lot. And what is thus recorded of Egypt is more or less true of other ancient heathen nations, among whom Blindness was far less prevalent. No systematic provision for the blind, indeed, appears to have been made; but when music became the resource of the destitute, they seem to have met with compassion and help. There is little doubt that what music now is to them it ever has been; and if we search for a reason, the plain one starts up that it swiftly and at once appeals to the sense most open and ready for outward impression. Whether grave or gay, merry or solemn, replete with fun or tender pathos,—it speaks intelligibly and promptly to the blind man, and to answer in the same language seems to him an easy task. Even the difficulties of rapid execution, though in reality increased, are partly hidden by his want of sight; and, if his powers of mind and body are but fairly awake, he at once believes that by means of music he can tell to those from whom he is so sadly cut off, some at least of his joys and sorrows, something of what he thinks, feels, and wishes, as the rest of the world do. "Many a time the seeing speak by looks, again and again by gestures which the eye alone can detect,"—says an acute thinker

(himself blind)—"the blind try to speak by music." As a rule, all blind people fancy that they have the gift of music, and need only make the attempt to become good players at once. In every Blind School nine-tenths of the pupils believe this, and of those who get their living in the streets ninety out of a hundred are musicians in some shape or other. These street performances, as the reader knows, comprise almost every known shade of melancholy sound, as well as here and there a gleam of melody and success. As far as a certain amount of manual dexterity goes—the accurate measure and rhythm, the precise progression of the parts of a fugue, or of bass, tenor, alto, and treble, all may be fairly observed; but when one looks for that exquisite finish and delicacy of expression which all music demands, that subtle weaving together of light and shade, which make up the cloudy passion or glorious light of Beethoven, the solemn grandeur or tenderness of Handel, the stormy joy and rush of the 'Elijah,' or the endless fairy grace of Mozart,—in a word, that inner soul of music without which it is but barren sound,—there, too often, the blind man fails, and there he is least conscious of his failure. This may spring from his

having been taught badly; too much by rote and rule; or even too much by ear, and thus having been in some degree led to imagine that in catching hold of the mere sound of a phrase, or a succession of phrases, he is getting hold of the music. But arise how it may, the evil is undoubted, and varies only in degree. The want of this higher sense is to melody what the loss of perfume would be to flowers, of colour to the glory of sunset, almost of light to the world itself. Whether the blow that snatches from the blind man his share in the glory and grace of light, does not too often impair or destroy that diviner inner sense which discerns the full perfection of odour, of colour, and melody, the fragrant breath of morning, the inborn rhythm of all true verse, or the *ἀνήριθμον γέλασμα* of the wide-spread sea, is a problem difficult to solve. But there can be no possible doubt that, however well old Homer's words—

> Τὸν πέρι Μοῦσ' ἐφίλησεν, δίδουδ' ἀγαθόντε κακοί τε,
> Ὀφθαλμῶν μὲν ἄμερσε, δίδουδ' ἡδεῖαν ἀοιδήν . . .

may have fitted Demodocus, or the "Bard of Troy divine" himself, they are not the general heritage of blind musicians or poets. Every now and then, in the musical world, there rises for a moment to the surface

some strange prodigy like Blind Tom, whose public concerts at St. James's Hall in 1866 attracted considerable attention; and so peculiar, indeed, was his case, and so unlike that of other blind musicians, that we pause to notice a few points in his history. He was the son of a negro slave, born in South Georgia in the year 1850; and brought up among other slave children. He was, too, a thorough "nigger," jet black, with thick blubber lips, protruding heels, and woolly hair. Up to seven years old, he was counted and treated as an idiot; when, suddenly, one night he was overheard playing the piano in his master's drawing-room; touching it with singular grace and beauty, wandering through rapid cadences, and wild bursts of melody, as a finished musician. As far as could be known, he had never even touched a piano till that night. But from that time forth, he was a prodigy among the planters' wives and daughters, and had free access to the piano, on which he every day did greater wonders; repeating without effort almost note by note any music once played to him, and with wonderful accuracy, mimicking any fault or peculiarity in the style of the performer. But, fondest of all was he of wandering away into some sad minor

key, full of passion, sorrow, or pain that seemed striving for utterance, and yet was full of mystery to those who listened. His marvellous powers were soon exhibited to the American public; and then created as much astonishment as they have since done in London. After once hearing them, he would sit down and play, with amazing correctness, difficult pieces of music, a dozen pages in length; and placed at the piano with another performer he (like Mozart at nine years old) played a perfect bass accompaniment even to the treble of music heard for the first time. After any prolonged musical effort, says his American biographer, his whole bodily frame seems to give way, and exhaustion follows, accompanied by epileptic spasms. He sits full half a yard from the piano, with outstretched arms, clutching at the keys at first "like an ape clutching food," and now and then bursting out into an idiotic laugh. Then the head falls back, the hands begin to work, and wild strains of harmony float over the room, such as have rarely fallen on the ear before, or, in rapid succession, passages from Weber, Beethoven, and Mozart, all full of such intense passion that the whole audience are snatched into a wild uproar of applause, which the poor idiotic musician is himself

the first to begin, and to end with a loud ringing laugh of "Yha, Yha!" in true negro fashion. Then, when all is over, a weary look of despair settles down on the distorted face, a tired sigh steals from the restless lips,—and the last spark of music seems to have faded out into hopeless, dead, vacancy.

But cases of this kind are altogether exceptional, and afford no safe ground for precedent, or indeed for argument of any kind. Tom's case is marked by so many strangely odd and contradictory features as almost to defy criticism, or the formation of anything like a clear judgment. He professed to have a wonderfully keen and sensitive ear; and he really had great dexterity in repeating with a parrot-like correctness phrases, or even long passages, of music only once heard; but on the other hand one of his favourite feats was to produce an outrageous, discordant, jumble of sound which no ear of the slightest pretence to sensibility could produce or endure without intense pain and disgust; *playing*, it is said, *an air in one key with the right hand, an accompaniment in another key, while he sang the air in a third!* Any such case as his therefore must stand alone, as a positive anomaly; if not as a monstrosity best fitted for Barnum's musical museum.

If we turn to the music of the streets, we descend at once to a lower grade than this; to performances which Mr. Mayhew roughly divides into "the tolerable and the intolerable," the latter variety, we fear, being by far the most prevalent. By these performers music is employed not as a means of giving pleasure, but of rousing compassion. Take, for example, the case of old Blind Sarah,* whom many of my readers must have seen about the streets of London, and once having heard could never forget. She had been upon the streets of London for forty years, having been born 1786, and cast adrift by the Workhouse at the age of twenty. Her instrument was the hurdy-gurdy,—the "Cymbal" she insisted on calling it, which it took her five months to learn. During her forty years of wandering she had had four guides, and had worn out three instruments. It took her about three weeks to learn a new tune on the hurdy-gurdy; and her complete stock which, even at last, rarely exceeded a dozen, included 'Moll Brook,' 'Harlequin Hamlet,' and the 'New-rigged Ship,' old-fashioned ditties strangely

* A good, though flattering, likeness of Sarah and her guide is now to be seen at the Water Colour Exhibition in Pall Mall (Dec. 8, 1866).

out of place in these days, when such trash as 'Slap-Bang' is omnipotent in the streets. A more squalid, bedraggled old creature than this wretched, little, grimy old woman it would be hard to imagine, unless one pitched upon the guide who led her about on her daily round of importunity. Nothing could be more forlornly hideous than the noise she managed to extract from the "cymbals;" yet she contrived to rouse the pity of passers-by by her destitute appearance, if not by the beauty of her music, of which she loved to say, "King David used to play on one of these here instruments, which it isn't hard to play; *the only thing is to kip the works covered up, or the half-pence is apt to drop in.*" From the days of Shimei down to Colenso the sweet singer of Israel has suffered many indignities, but this crowning accusation of playing the "hurdy-gurdy" it would be hard to exceed; though unconsciously offered by a poor wandering outcast, who merely meant to dignify her own office. She kept to her vagrant life in the streets to the very last, and managed to make a living for herself and guide, until one luckless day, in crossing Seymour Street, the two old women were knocked down by a random cab, the guide being picked up dead, and

Blind Sarah so injured as to rally but for a few months.

Here and there, among these wandering minstrels, may be found some one performer of higher grade and taste than Sarah; but this is the exception to the rule, if only for the one unhappy reason that anything like even moderate taste, or skill, in playing or singing—especially in a man—finds better employment and higher pay in the taproom or concert-room of the public-house.

But however sad all this music of the streets, as has been proved on a previous page, a far higher grade of music is now to be found in all the better Blind Schools of Europe, as at Paris, Vienna, London, and Zurich, at which latter place Mendelssohn, with his usual kindliness, once won the hearts of all the blind inmates. He was there in the hot summer of 1842, to rest and recruit his overtaxed brain; and though besieged by a crowd of eager musicians and amateurs, would accept of no invitation. But hearing that the pupils of the Blind School were most anxious, as *they* said, to see him, in their favour he made an exception. He spoke to the sightless assembly in kindest words, he listened to their songs and choruses, and, score in hand, to some even of

their own compositions, showing clearly his interest and pleasure. Seeing a correction in the score, and finding it to be the blind musician's own work, "It is right," he kindly said, "and makes the passage more correct, but it was better and more striking before; take care that your corrections are improvements, —a cultivated ear wants no rules, but is its own rule and measure." And then the great musician asked permission to sit down at their piano, and wandered away into one of those wild and tender strains of speaking melody for which he was so famous. His silent, wrapt, audience listened so intently to 'The Song without Words,' that a pinfall would have broken the stillness. One by one over the eager faces crept the air of deep, quiet joy, until in the midst of the great flood of mingling harmonies, a voice came to them out of the very chorus they had just been singing. Then their enthusiasm knew no bounds. The great master had carried them away, at his will, to heights of joy and triumphant praise before unknown; he had whispered to them of sorrow, and the cloudy ways of life, in words of soft, unbroken tenderness; and now he stirred their inmost depths by a strain of their own weaving, into which he poured a new tide of living song, new grace, and new meaning. No words

could tell what they felt; they could have pressed him to their very hearts for joy. This was not long before the great musician's death; but he still lives in the Blind School at Zurich, and there still remains as a precious relic the master's chair, in which he sat.

Of course, where real musical genius, intellect, and education are combined, the Blind musician may at once take high rank. And many who know the county of Herts well have heard of one such musician, whose masterly hand on the organ and piano is even better known than his amusing pen. Give him but a single theme, such as "Twilight," "A Cradle Song," or "The Sea," and he will swiftly carry away all who listen, to quiet, lonely hill-sides, and cloudy valleys; to the peace of fading, dusky skies, or rippling waters under the first light of stars; through the calm of repose, the joy of returning light; along the margin of the broad sea, as its treacherous waves cream over smooth sand, or dash in wild stormy billows on the rocky shore. If the post brings him news of a friend's marriage, or the birth of a first-born, he flies to tell the good news to the piano, and there crowns the marriage-feast or the font with garlands of bright flowers, that fill the lonely old Manor-house with an echo of new joy.

Genius like this, of course, is rare—more rare, perhaps, and more cherished along the ways of darkened life than in the fuller glare of day; but when found, then to the blind man in his darkness

> "The dainty Muse rolls back the silver gate
> Of melody; and strange immortal harmonies
> Come floating from the depths beyond,
> To snatch the ravished ear aloft
> On wings of joy."

Such a musician as this, as it has been well said of Schubert, enters on music as a prince on his own dominions. What others toil for he wins. Melody flows from him like perfume from the rose; harmony is the atmosphere he breathes. If a master wishes to teach him anything, ten to one he knows it already, by some hidden keen instinct, which is to him in the place of written law, rule, and even learning itself.* Men of genius have a right to overlook the law, and for a simple reason, it is they who often make law, and bring it to perfection. If they invent a departure from a rule, that departure may become a new rule. But to do this, Genius is indispensable.† To which it may be added that a

* H. R. Hawes, in an able sketch of Schubert and Chopin.

† 'Life of Handel,' by Schœlcher.

breaker of the law is a far commoner bird than a genius.

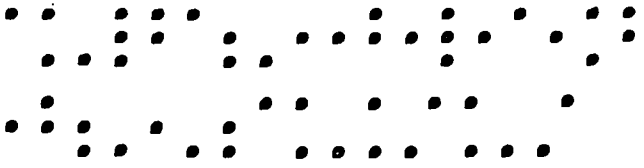
Many attempts have been made to invent a system of Musical Notation, which might be printed in raised type, and so be perceptible to the touch of the blind-musician. But, though some of these systems are ingenious enough, and bars of a simple melody may actually be deciphered by the finger of a blind man, yet, the whole process of reading is so slow; and embossing itself is so enormously bulky, and so expensive, that none of them have ever been of any practical use. As ingenious and amusing puzzles they may deserve high praise; but that they can ever become of any real, practical value to the blind, is a question to be much doubted. Four of these Systems are founded on the adoption of arbitrary signs, or letters, for the notes, and for most of the attendant marks or words of musical expression; and some idea of their various principles may be formed by glancing at the two next pages, where, below a single line of music printed in the ordinary type, will be found the same passage represented according to the systems of Rousseau, M. Braille, and M, Guadet; while the first few bars of the Old Hundredth Psalm will illustrate the American system invented by a blind man named Mahoney.

LE GRAND ROI DAGOBERT.

This passage, expressed in *Rousseau's* 'System of Musical Notation,' would run thus:—

(S) (d) $\frac{6}{8}$ 3 c | c b b a | a . b . | c d c b a b |

The same in Braille's system of dots:—

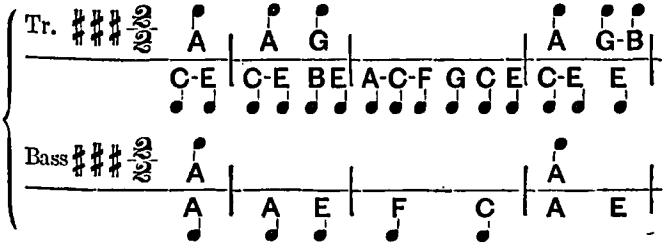


The same in Guadet's system—

♯♯ $\frac{6}{8}$ 3 o òìì e. 1. ouoie1

All these three systems are open to the objection of being very elaborate and complicated; of affording little or no means for indicating musical expression; of being very hard to decipher quickly and accurately; offering great facility for mistakes; and being at the same time very bulky and extremely costly; while, after all, the keenest of blind readers only makes out after great labour the one hard line of single treble notes, which his music-master could dictate to him in less than a minute, with little trouble, and without expense.

According to Mahoney's system the first four bars of "The Old Hundredth," would run thus:—*



"His object," he says, "is to simplify the method of printing music in raised characters for the blind, by substituting the letters by which the notes are known for the notes themselves; the value of each note being designated by affixing to the letter the usual signs of crotchet, quaver, semiquaver, &c, and thus compressing the music into a smaller space.

But, however ingenious Mr. Mahoney's plan may appear to the eye of the sighted reader, and simple when compared with that of Braille, the process of deciphering a piece of embossed music, in this or any other system, must be a very long, tedious operation, to which the musician cannot have recourse while

* This Notation is hardly intelligible, and certainly seems incorrect; but it is printed accurately from the only embossed copy that can be found.

playing; and offering a very doubtful assistance in attempting to learn a new piece. As far as we are aware, no embossed system for teaching music has been introduced into any of the English Blind Schools, and the decision seems to be a wise one. New music is taught to the pupil, mainly, by dictation; he having acquired a knowledge of the ordinary rudiments, as to notes, scales, keys, and fingering in the ordinary way. A passage, or phrase, having been dictated, is then sung, or played, either with single notes, or full chords, as the case may require; and this the pupil repeats vocally, or on the instrument, until he has mastered it; dealing with each note, phrase, or passage, as a beginner at reading would with ordinary letters, syllables, words, phrases, and sentences. In this way an air, or a longer piece of music, is gradually but accurately learned; and having thus been once printed on the blind boy's memory, is soon stereotyped for future use. Once stereotyped, it is rarely forgotten or lost. After four or five years' steady instruction of this kind, a blind youth has been known to master in a few months all the tunes in 'Hymns, Ancient and Modern,' so as to be able to become a candidate for the situation of organist at a large country Parish Church where this

book was used. It is pleasant to add that he obtained the appointment, still retains it, and discharges its duties to the entire satisfaction of the parishioners.

Some little music, and a Book of Instructions, have also been embossed in the ordinary type, but the process is far too expensive, and the operation of deciphering it far too uncertain and too tedious ever to admit of its being used in any but rare and exceptional cases.

The Instrumental Band at the Blind School, at Paris, consists of 36 *Performers.*

12 Violins.	1 Hautboy.	3 Drums.
5 Violoncellos.	2 Clarionets.	1 Triangle.
2 Contra Bassi.	5 Brass Instruments.	
3 Flutes.	2 Bassoons.	

At Barcelona, of 23 *Performers.*

10 Violins.	2 Clarionets.	1 Trumpet.
2 Contra Bassi.	2 Cornets.	1 Drum.
2 Horns.	3 Flutes.	

At the Blind School, St. George's-fields, of 37 *Performers.*

20 Violins.	2 Clarionets.	1 Double Bass.
2 Tenors.	3 Flutes.	1 Drum.
6 Brass Instruments.	1 Violoncello.	1 Triangle.

CHAPTER V.

WE come now to the different rival systems of Embossed Printing which have unhappily been invented for the use, we had almost said distraction, of blind people. So fierce and so bitter has been the war waged over this knotty problem, and so eager have the partisans of each new invention been to claim for themselves the discovery of the one, sole, best method, that the blind man's library now consists of a very few volumes, only to be had at a price which puts them almost entirely beyond the reach of the class who most need them. The four systems* that need notice here, are those of Frere,

* There is no need to mention the minor systems which have from time to time been found out by private friends of the blind—at least ten or a dozen in number. The last new one is the invention of B. Mitford, Esq., of Cheltenham. It is in the Roman letter, and has no peculiarity whatever but that of forcing blind people to read

Lucas, Moon, and Alston; each claiming to be the one infallible method of reading for the Blind. Mr. Frere's system is, he tells us, based entirely on the phonetic principle, or combination of elementary sounds, and is conveyed to the touch of the blind reader by a series of stenographic signs or symbols. Thus instead of the four letters, T, N, D, R, he substitutes four lines, , —, , , respectively named *Teh, Un, Deh, Ur;* while F, G, J, and B, are metamorphosed into Geh , Uf, Jeh, and Beh; and so on through the rest of the alphabet, in a series of sounds, "guttural," "hissing," and "gushing," with hard and soft breathing, and aspirations. All this, be it remembered, is to teach a poor, ignorant, blind child the names and meaning of letters which are supposed to be too hard for him in their ordinary shapes and names. He is accordingly introduced to angles , crooks , crescents , dots (which

in perpendicular columns of words, from the top to the bottom of the page, instead of from left to right as the rest of the world do. The alphabet thus presents itself:—

A	F	F	E	D
B	G	O	B	
C	H	R	L	
D	I	T	I	
E	J, &c.	H	N	

latter stand for vowels); dots final, dots upper, middle, and lower, upwards, downwards; angles, with points forwards or backwards; to straight lines downwards or sideways; long vowels, and short vowels; in all, 29 signs; each accompanied by a rule in prose, or still drearier verse, of some three or four lines, to be learned by heart by the hapless disciple, to whom A B C is a mystery. All that can be said of this method is that it is a very ingenious and elaborate system of shorthand, very difficult—we speak from positive experience—to be understood by a person with eyes, and hopelessly bewildering to any one without them. It is said that many blind people have learned to read by Frere, and truly, no doubt; for time, money, skill, and love have been expended on its behalf with lavish generosity. Armed with the same weapons, we would undertake to teach half-a-dozen such scholars Polish or Scandinavian.

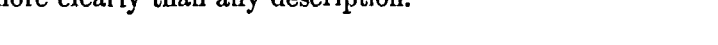
Next comes Lucas's system, still more arbitrary in character, and more purely stenographic* than

* In inventing systems for the Blind, the interests of the majority, not of the minority, should be consulted. No one dreams of inventing a new system of geometry because a few find it difficult to get over the 'Ass's Bridge;' yet new Alphabets are continually being contrived for the Blind, because a few have a difficulty in reading by the one in common use."

Frere's. Yet, in spite of its being a short-hand system, says the Rev. W. Taylor (one of the highest authorities on all subjects connected with the Blind), "Lucas's New Testament occupies two thousand eight hundred square inches of page more than Alston's (the Roman letter) notwithstanding its abbreviations and contractions." Instead of a simple character for each of the elementary sounds of the English language it gives an alphabet redundant in eight characters, and deficient in ten; making no distinction between long vowels and short ones. F appears in four different disguises as f, ff, ph, and gh; final ees are abolished, and we meet with such strange monsters as *fac, accurat, censur*, and *tim*, for time, censure, face, and accurate; we find people "*laffing*" without *noing* it, at being *cawt*, and not *abl* to *giv* a *reson;* "because when the sound of a word is different from the spelling, the spelling is altered; until at last, in utter bewilderment with the long list of contractions and omissions, we are at a loss to know whether our respectable old friend Q stands for Queen, Quaker, or Question; or why H should not stand for horrible, as well as P for puzzle, instead of for "have," "hither," "he;" "put," "patience," or "upon," according to Rule in "Table 1, for learners." A single line in the

Lucasian dialect will probably explain its full beauty more clearly than any description.

1. *Pure Lucas.*



2. *Translated into Letters.*

If. t. bl. bi. hs. p. h. wh. v. b. pzld. u. t. ed.

3. *Translated into Words.*

If the blind Boy has patience he will verily be puzzled unto the end.

4. *Various readings**

house upon have with unity the
If two blind Boy his put hither which vanity be puzzled you to end.
9th

So much for short, simple, and common words, as in the above example; but if the learner meet with any longer ones, he is more mystified than ever. *Nos* stands for *nevertheless*, *kd* for *kingdom*, instead of *kid; nsg* for *notwithstanding*, *pr* for *prayer*, while *fr* stands for *friend*, and *thf* not for *thief*, but *therefore; tables* becomes *tabs*, and *overtake*, *otak;* while *elasti wrnss* stands for *everlasting weariness*. Our readers will be able to judge from this how far such an elaborate, complicated, and purely arbitrary system is likely to

* "Various Readings;" because most of these signs have two or more distinct meanings; hs = his, has, house; u = unity, you, and unto, &c. &c.

help the blind boy over the miseries of the Alphabet and the Spelling Book.

The third of the arbitrary systems is the invention of Mr. Moon, who deserves infinite praise, as a blind man, for his labours on behalf of himself and his fellow-sufferers; though it is to be wished that he had never meddled with the alphabet but to print it in the old Roman letter. He claims to have avoided "the complicated form of the Roman letter, and the still less discernible angular type," by a revised alphabet, each letter of which is formed of one line, or at the most of two, having a *partial resemblance* to those in common use, and allowing only of five contractions, *ment*, *ing*, *tion*, *ness*, and *and*, each of which is represented by its final letter. A dozen letters of this alphabet will show how far intricacies have been avoided, or likeness to the ordinary letter has been kept up.

We must agree with him that the resemblance he speaks of is partial enough, but we are at a loss to discover in what way our respected old friends Z, and K, N, U, and J are more complicated than the half-

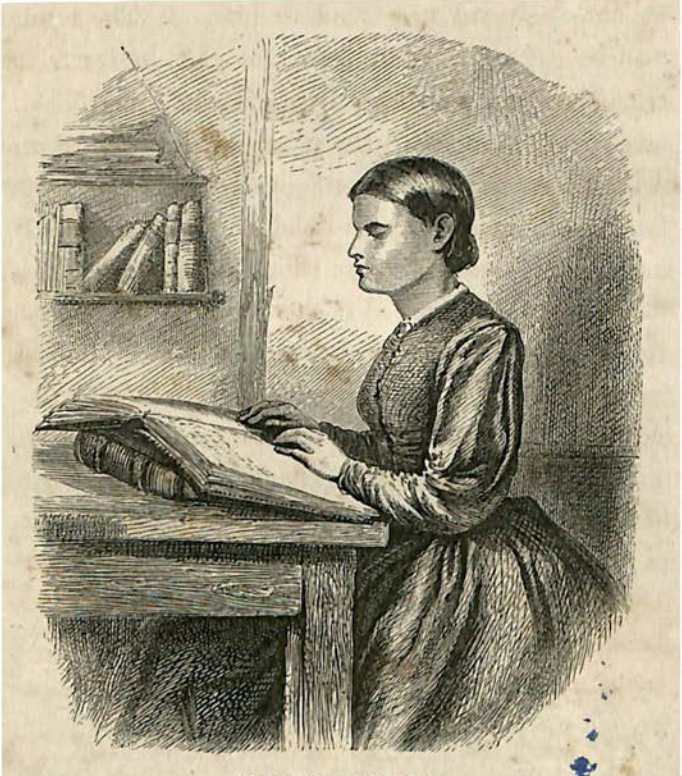
barbarous looking symbols ⊂, ⊆, <, ⌒, ∪, ⊃. One *lunar* line will suffice to show the aspect of the whole system to the eye of the seeing, and to the finger of the blind boy:—

A MAN'S OWN GEESE
∧ ⌐∧∧/ o∩∧ ⌐⊏⊏/⊏
TO HIM ARE ALL SWANS.
—o o⌐ ∧\⊏ ∧⊔⊔ /∩∧∧/

Whatever claims these arbitrary systems may have on the blind boy's notice, one fatal defect runs through them all, viz., that they tend to cut him off more than ever from the rest of the world, and especially from those who are able to read, and *to help him when he comes to a hard word.* The task of learning Moon, Frere, or Lucas, is to him like learning a new language; with this difference, that when he has learned it, and hard work in the course of years has deadened his sense of touch, not a single friend or companion *at home* will understand it, or be able to read with the eye the mysterious symbols which the reading-finger can no longer discern. Twenty years ago, shrewd old Abbé Carton spoke to this very point: "En effet," he says, "si un caractère, connu des clairvoyants, est employé dans l'impression en relief pour

les aveugles, ces infortunés sont plus rapprochés des autres hommes que s'ils se servaient d'un caractère inconnu de ceux qui les entourent. . . . . Diminuer la difficulté qu'auraient les clairvoyants à connaître l'alphabet des aveugles, est réellement travailler en faveur des aveugles. Le plus grand malheur des aveugles est leur isolément." Common sense ought long ago to have stepped in and settled this question, but she has had the door shut in her face by prejudice; and the strife still goes on. Meanwhile the old Roman letter, in spite of all patent inventions, manages to hold her own; to print books far less expensive and less bulky than Moon's, and, if the testimony of a large number of blind children is to be believed, quite as easily read; the New Testament in Alston costing 2*l.*, that in Moon's type 4*l.* 10*s.* The use of the Roman letter helps the blind boy to read as all the rest of the world reads; to spell and to write as they do. The other three systems absolutely prevent his doing so, and inflict upon him the intolerable hardship of learning a semibarbarous jangle which no one with eyes can understand, and which he himself is unable to express in writing. Sooner or later (the sooner the better) some one system of embossed printing will be generally adopted,

and it must embrace at least the following features:—
1. It must resemble as nearly as possible the type in



BLIND GIRL READING.

use among seeing men; that the blind scholar, in learning to read, may have every possible help from his remembrance of letters he *may* once have *seen*,

but which now his fingers must feel for him, or from any one who can read an ordinary book; or, if need be, that a friend may read to him. 2. The words must be *correctly* spelt in full; that when he learns to write, others may read his written words. And 3. All must agree on a clear, sharp type which the finger of the adult, hardened by rough work, and the keen touch of the child, may be alike able to discern. It is to be hoped that science, which has done so much for all other readers, will in due time provide for the dwellers in the land of darkness a literature and a typography which will help to make them wiser, better, and happier. Many earnest men are working in this good cause. It is to be hoped that, as "*pax paritur bello*," differences will some day be laid aside, and the work crowned with that strength and success which unity of action as well as purpose alone can give.

CHAPTER VI.

Should Blind Children be Educated with those who have Sight, or not?

THE question at the head of this chapter may, at first sight, seem as easily answered as asked. Yet many considerations have to be weighed before any answer can be returned to it; and even then the reply will be neither so definite nor so clear as might be wished.

First, as regards Schools where large numbers of blind children are being educated, the experiment of mingling them with pupils who have sight has never been fully tried. In one or two of the minor English schools, indeed, where the number of pupils is so small as to permit all the teaching to be individual, a few blind children have been associated with deaf mutes; but with no marked result or advantage to either party. Again, in Donaldson's famous and

admirable Asylum near Edinburgh, a somewhat similar experiment has been tried, by mingling with the deaf and dumb orphans some few who have speech and hearing; at some few times for instruction in the school-room, and always for out-door work and recreation. And the experiment has so far succeeded, because very much that the deaf-mute learns of industrial work and manual exercise, he learns in a great measure by imitation. In all that concerns the eye—that mighty engine in all education—he is quite on a level with those about him; he learns to dig in the garden, to plane a deal board, to drive in a nail, or to mend a torn jacket, almost as well as if he could hear all that his fellow-workers were saying.

But with the blind boy among those who can see, the whole question is changed so far as industrial work, manual labour, and recreation are concerned. In no one of these things is he on a par with his companions; imitation will rarely, if ever, help him to turn round the wheel a single inch. In some few easy sports and games, indeed, he may at last learn to take a small part, especially if his companions are few in number; but this recreation is not always satisfactory, and sometimes not safe. I have often seen

a dozen blind boys playing French and English, or even leap-frog, with great spirit, daring, and enjoyment; but in the one case half the fun was because all were precisely in one like condition, and in the other the ease and safety with which the game went on would have been greatly lessened if some of the merry frogs had been able to see their companions.

If out of twenty young basket-makers ten had sight and ten had not, the blind workers could derive little or no help in learning the trade from working with sighted companions; and in some points of detail the teacher would have to deal very differently with his scholars; while in other matters of rule and management each section would have a distinct treatment of its own. The presence of the sighted with the blind would, it has been thought, tend to brighten and freshen up the blind workers, and help to give life and animation to their work; and for a time it might be so. But by degrees the novelty to either party would wear off, and insensibly, but inevitably, the two sections of light and darkness, mixed but not blended, would move on towards separation, and each of the workers would fraternize with the members of his own kingdom. More and more, I fancy, this tendency to separation would increase; and thus the very object

for which the two classes were mingled would be frustrated.

The boys with sight would by degrees learn their advantages over their less fortunate companions, claim and exercise a sort of superiority over, and difference from, them; and thence would follow further distinction and wider separation. It may be that the experiment has never been fully and fairly tried on a large scale, and for obvious reasons it is not likely to be tried; but the above results are those to which common sense points as most natural and most probable. The experiment is not likely to be tried, because it will scarcely happen that any such School will be founded equally for the reception of the Sighted as well as the Blind; while the charter of no existing school will admit of its being done at present.

Whether a blind boy might not under certain circumstances be sent with advantage to a school where all his companions have sight, is another and different question, to which there is a clearer and easier answer. All here must depend on the character of the school, and, above all, of the master; of course entirely omitting from the calculation all such cases as those of Saunderson and Huber. Genius of that cast will make its way, whether at school or under home-

teaching. Whatever the river of difficulty be, genius, if there be no bridge, will build one, or find a ford. But for a boy of ordinary ability, while young, there can be no doubt that in a good school, under a good master, very much may be done among scholars of his own age who have sight. He can read, cipher, and even write from dictation, with his class; it may be more slowly, but not less correctly, than his companions; while, in all that they are taught orally, he at least can take a good share. If he has brains, and is fairly cared for at home, his religious instruction may be almost identical with theirs. The grand thing is in every way to lessen his sense of isolation, to show him that he is not meant to be cut off from the rest of the world, but as far as possible to feel, to think, and to act, as others do. He must learn to be guided by the same principles, the same laws of right and wrong, the same responsibility, the same rules of honesty, diligence, truth, and holiness; that he, too, may share in the same joys, advantages, trials, blessings, and sufferings, which befall others. The less he thinks of himself as belonging to a separate, special, kingdom and race, the more broadly and deeply he learns to see that he is bound to others, as others are bound to him; that the two kingdoms of

light and darkness are, after all, one in the sight of Him who made both; the better will it be for him in body, mind, and soul. For, the more heartily he learns to believe this, the more and more will he see and feel the crowning truth of all, that "no man liveth or dieth unto himself." He will escape the fatal peril of selfishness, and thus gain new life, new hope, new joy, and content. If a blind boy be at all trained and taught in this spirit, and then is fortunate enough to be admitted into a good Blind School, his progress will be rapid and easy. His work there will be a pleasure to himself, and to all who have the difficult task of teaching him. Some, at least, of the barriers which seem to divide him from the power and life of seeing men will be broken down, some of the difficulties removed, and the way opened to that measure of success and of goodly fruit to which every worker has a right to look, and answering to the account which all must render of talents given, time spent, and work done.

CHAPTER VII.

TWO final topics—the general Statistics of European Blindness, and the Educational status of the upper and middle class—yet require a few words. Blindness has been supposed to become gradually more prevalent as we get nearer to the Equator, and fixed ratios of the Blind to the seeing have even been given to different parallels of latitude. But, however ingenious or curious such a speculation may be, there are at present no sufficient data to go upon. There are other causes, far more powerful than climate, at work in tropical countries; such as bad food, unhealthy lodging, disregard of all sanitary laws, and ignorance of ophthalmic surgery. And a glance at the accompanying table from the last Census returns will show that all reasoning from mere geographical position is absolutely futile.

Countries.	Number of Blind.	Ratio to Population.
Norway	2,759	1 in 540
Sweden	2,566	,, 1,419
Denmark	1,710	,, 1,523
Prussia	10,205	,, 1,738
Saxony	1,606	,, 1,386
Hanover	1,196	,, 1,579
Wurtemberg	1,198	,, 1,436
Hesse Darmstadt	696	,, 1,231
Oldenburg	167	,, 1,720
Bavaria	2,362	,, 1,986
France	38,413	,, 938
Savoy	614	,, 884
Piedmont	5,683	,, 887
Belgium	3,675	,, 1,233
Holland	1,990	,, 1,663
United States of America ..	12,635	,, 2,470
Newfoundland	86	,, 1,426
Nova Scotia	185	,, 1,788
Prince Edward's Island ..	43	,, 1,880

For example, why should the ratio in Norway be 1 in 540, while in the adjacent country it suddenly sinks to 1 in 1400? or in poor little Denmark* to 1523? Why should Newfoundland, again, be so widely apart from Prince Edward's Island as 1400 from 1880? And why should the United States of America enjoy an immunity from blindness such as, we believe, no other country in the world can boast?

* It would be a curious point to inquire how far the common belief in the strength and endurance of dark blue and grey eyes, over brown and light blue, affects the light-haired, blue-eyed Norsemen.

the ratio of blind people to those with sight—if American statistics are not worthless—being 1 in 2970; not one-half that of Great Britain.

The gist of the previous pages has mainly applied to the lower and less-educated class of blind persons. We have endeavoured to give our readers some notion as to their numbers, occupation, and general status, to show what has been done, and what remains to be done, for them. Blindness in the United States* seems just now to be on the increase; and though in England it would for the time appear to be on the decrease, it may possibly again mount to the ratio which it maintained twenty years ago; two of its stanchest allies, typhus and scarlet fever, being almost as deadly as ever. In the mean while, however, no provision whatever appears to be made for the education of blind children of the upper class, who stand in need of special teaching almost as much as their poorer fellow-sufferers. The want of it condemns them to many a long, weary hour of darkness and idleness which the poorer blind boy often escapes. "Never," says a blind man, "is labour more laborious, never is patience more tried, than when a blind

* See 'Report of Pennsylvanian Institution for 1864,' p. 13.

child sits with his hands before him in ever-during darkness;" whereas, "in work there is a perennial and sacred nobleness. However benighted, or forgetful of his high calling, there is always hope in a man that actually and earnestly works; in idleness alone is there perpetual despair."* What is really needed is a well-organised school or college† for the education of children of both sexes from the upper ranks of life, where they may be not only thoroughly trained in all the special acquirements of the blind, but, as far as possible, in all the other branches of that wide and liberal education which is the heritage of the seeing. The want of some such institution is a very great and serious one, when it is remembered to what utter shipwreck of all power, heart, and hope in life, blindness condemns its victims—so great and so intense that wise and good men in every age have for a time given way to it; and even John Milton, who grandly claims for himself and all his fellow-sufferers, that they are the special care of the

* Bull, p. 172.

† Such a college has, we believe, been at last just started under the able direction of the Rev. W Taylor, near Worcester; under the patronage, it is said, of the Bishop of Worcester, Lord Lyttleton, and other influential friends.

Almighty, "dwelling under the shadow of His wings," yet elsewhere mourns the loss of light in words of pathetic and unequalled tenderness:—"Nos ab injuriis hominum non modo incolumes, sed pene sacros divina lex reddidit, divinus favor; nec tam oculorum hebetudine quam *cœlestium alarum umbra* has nobis fecisse tenebras videtur."* And, elsewhere, with almost equal grandeur and beauty of words, "If, as it is written, Man shall not live by bread alone, but by every word that proceedeth out of the mouth of God, why should not each likewise acquiesce in the reflection that he derives the benefit of sight, not from his eyes alone, but from the guidance and providence of the same Supreme Being? Whilst He looks out, and provides for me as He does, and leads me with His hand through the paths of life, I willingly surrender my own vision in conformity to His good pleasure. And with a strong heart and steadfast, Phalaris, I bid you farewell. It is not, however, miserable to be blind; he only is miserable who cannot acquiesce in his blindness with fortitude." To him, indeed, the sun is dark and silent as the moon,

"Hid in her vacant interlunar cave."

* Defens. Secund.

Years come and go, cold and heat, summer and winter, day and night; but to him day returns not; nor golden dawn nor summer eve, nor spring flowers, nor living creature, nor human face divine,

> "But cloud instead, and ever-during dark
> Surrounds me, from the cheerful ways of men
> Cut off, and for the book of knowledge fair
> Presented with a universal blank." *

Thousands are still to be found in the same cloud of darkness which fell about the pathway of Milton's life; few possibly having genius of kindred power with his; but many doubtless of fair and goodly talents, waiting, hoping, for some real work in life which may never come. Our object has been to show that their hope is a just one, that the need is vital; of what kind that work should be, and the noble fruit it will surely bear. It would be hard to exaggerate the value, the beauty, and the interest of such work when once achieved. None, indeed, but He who made the eye can give sight to the blind; but human hands and human hearts may do much to help them to find out their share in all the privileges, joys, and responsibilities of human

* 'Paradise Lost.' Book iii. 45.

toil, and in it to discover Him who has 'set up his present kingdom here in this world of work, giving to every man his task, and, when evening is come, will give to each labourer his due wage of reward.*

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* Sirion.

CHAPTER VIII.

ALTHOUGH the lives of many Blind people, if carefully examined, would no doubt, on the whole, be found uneventful, there is still a large number among them whose biographies, if they could but be written, would be replete with interest. But here, on the very threshhold of the work, we are met by a difficulty that renders the biographer's task a most difficult one; and that is, the utter scantiness of the materials with which he has to deal. Even in the case of really famous blind people, he now and then comes to sudden and bewildering blanks. The date of the birth is recorded—then the fatal calamity of blindness—and then follows a whole block of years during which there is hardly a trace of what befel the child in the first dreary days of cloud; nothing of *how* he began to learn, *when* the light first sprang up for him, *what means* his

friends took to alleviate his privation, or to help him on towards true and happy toil of body and of mind. For example, in the life of such a man as Saunderson —from the time of his becoming blind at twelve months old to his having done all he could at the Free School of Pennistone—there is not a trace of how he accomplished his work; the period is all but a dead blank. We read that he soon learned all that school could teach him; that he then set to work at home, almost single-handed, and yet in a few years went up to Cambridge with the fame of a great mathematician. But of the manner in which he achieved this wondrous success, and of the way in which he laid up his stores of learning, we know nothing.

Of Zisca, the Bohemian Reformer, in the time of John Huss and Jerome of Prague, we find that he suddenly became blind from an arrow-wound in the eye, and then we are simply told that "he was more dreaded by the enemies of his country after he became blind than he had been before the accident;" while, on his tomb at Craslow is inscribed, "Here lies John Zisca, who having defended his country against the encroachments of Papal tyranny, rests in this hallowed place in spite of the Pope." Of John

Gower, the friend and companion of Chaucer—a poet and the author of *Confessio Amantis*—that he suddenly became blind in the first year of Henry the Fourth, and that at his own expense he rebuilt the famous and beautiful church of St. Mary Overie, where his tomb is still to be seen. Of Henry Moyes, the professor of chemistry, that he lost his sight at three years old, and then comes a blank till he left College; of John Troughton, blind from small-pox at four years old, that he became Scholar and Fellow of St. John's College, Cambridge; and of Franciscus Salinas, A.D. 1513, son of the treasurer of Burgos, that, though blind from his birth, he became famous as a Greek scholar, as an organist, and as a musical writer. The mathematician, the warrior, the poet, the chemist, the scholar, and the musician, in spite of all difficulties, won their way to fame; but of the way in which they won the successive steps in this arduous and noble task not a trace is to be found. The very element in their lives which gives them abiding interest is altogether omitted, and the reader in most cases is driven to be content with such scanty reminiscences as mark the career of every ordinary man. Of Moyes it is said that he managed to acquire a sound knowledge of music, mechanics,

geometry, optics, algebra, astronomy, chemistry, and most of the branches of the Newtonian Philosophy; but as to how he acquired this knowledge, not a word is told us.

The few biographical sketches, therefore, which follow this chapter, must not be taken as including the most interesting or most famous of Blind men, but simply those of whom most is known of a sufficiently accurate kind to afford materials for biography. Other equally famous and equally interesting names occur in the long list of remarkable men, concerning too many of whom it may fairly and justly be said, "*nominis umbra manet*;" but there the biographer must stop. Of Milton, in the days of his darkness, of Lucas, Gough, Rushton, James, Stanley, John of Bohemia, "Blind Fielding" the terror of Westminster thieves, Saunderson and Euler, and a host of others,

"Each in their several order crowned,"

one would willingly know a thousand details, but the wish is a vain one; and the few broken glimpses to be obtained of such men as Huber and Metcalf only serve to make our regret more pointed and more fruitless.

CHAPTER IX.

THE BLIND NATURALIST.

FRANCIS HUBER was born at Geneva in July, 1750. His father, John Huber, the physician, was a man of intelligence, wit, and imagination; for which, indeed, all his family were more or less famous, being thought worthy of the regard and friendship of Voltaire himself, the great mind of the sceptical age in which he lived, who condescended not only to read Huber's verses but to praise them at Ferney. He was also a musician and a naturalist, and Francis inherited most of his father's tastes. Geneva was a place where literature was cultivated to some extent, and though perhaps with more talk than depth, young Francis acquired a taste for it, and with great relish attended the public lectures at the college, as well as the private ones of M. de Laussure on physical science. On all these topics the boy talked eagerly with his father at home, picking up

knowledge in a desultory fashion, and even venturing to dabble in some few experiments in search of the philosopher's stone, which a relative had before tried to his own ruin. He was a pleasant, lively, youth of fifteen when the great trouble of his life befel him, and his bright day darkened into night. As many another precocious boy has done, he had injured his health by overworking his brain; and his eyes grew weak from having too much to do. He could do nothing in moderation; if at lessons he was ready and eager to work incessantly all day, and many a long hour at night which should have been spent in quiet sleep was given to reading, poetry, and romance. When his lamp failed him, he read by moonlight, and still further weakened the sight which was already growing dim. Alarmed at this, his father took him hastily off to Paris. But though the thought of a visit to the great and gay city charmed the boy, he was loath to say good-bye to his friends at Geneva, and specially to his dear friend and companion at the dancing-school, Marie Lullin, the daughter of one of the syndics of the Republic. But good-bye must be said even to one's sweetheart, and so after many vows of unchanging affection the lovers were parted; and to Paris went Francis Huber. There,

Wenzel the oculist gave a gloomy verdict as to the state of his eyes; while a Dr. Tronchin, finding signs of a tendency to consumption, sent him away to Stein, a village near Paris, so as to be out of the reach of books, and to find out the pleasure and profit of idleness; the divine principle of leisure; that life is not altogether a pursuit; that there are golden hours in it full of enrichment, when we may feed this mind of ours in a wise passiveness, when

> "The grass hath time to grow in meadow lands,
> And leisurely the opal, murmuring, sea
> Breaks on its yellow sands." *

Here he led a quiet life among the fields and hedgerows; watching the plough, the birds and bees; gathering wild flowers, and thinking of Marie Lullin. The days were long and happy, because mind and body were gaining strength; and he had no doubt that her love was as true as his own. But his sight was slowly fading, and when at the age of seventeen he returned to Geneva, his case was considered hopeless, while Wenzel dared not run the risk of an operation for cataract. Huber was then plainly told that he would shortly become

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* Fraser.

blind, and he bore the news with that steady and calm courage which marked and gladdened the whole of his long life. If only his betrothed was true to him, he was content; and true, indeed, she was. Her father, the syndic, at once refused to give his consent to their union. "My daughter," he said, "shall not marry a blind man;" but, for this very reason, she considered herself more bound to him than ever. "Now that he needs a guide to be always with him," said she, "nothing shall ever prevent our union."

It was in vain that her friends tempted her in a thousand ways to break off the engagement, in vain that her father tried to shake her firm determination. She was proof against them all, and as she really loved her betrothed, her affection was to him beyond price. To his great joy, she answered that she would wait till she had reached her majority—at the age of twenty-five—and then be united to him whom she had freely chosen. Seven long years were thus spent in anxious waiting; but they sped brightly and pleasantly to Huber. The cloud which had descended on him soon deepened into night, but he bore it bravely, and for her sake who was willing to share, and by sharing to lessen it, he even made

light of his trouble. He pretended to have more sight than he really had, lest she should repent of her constancy, often acting and speaking as if he could see. And so firm a hold did this get of him that in years long after he would still give way to his old habit, boasting of beauties in some favourite landscape which he knew only by hearsay, or from faint recollection; describing some dress, or even face, that he had never seen. Deeper and darker grew the cloud, until at last the seven years' trial was ended, the wedding-bells rang, and Marie Lullin was ready to plight her troth at the altar. This was the beginning of forty years' married life of almost unbroken happiness. She was his friend, companion, and a loving wife; his reader, amanuensis, secretary and—as he said—a good pair of eyes to him, a right hand in all his troubles, and a light for his darkest days. She was a dainty, diminutive, little body, but full of life and vivacity; answering well to her husband's description of "*mens magna in corpore parvo.*"* "Were I not blind," he used to say, "I should never know how truly one so afflicted could

* It is to her he applies the character of his favourites the bees,—

"Ingentes animos angusto in pectore versant."

be loved; and to me my Marie is ever young, fresh, and pretty."

She soon found many ways of alleviating his sad calamity. Like all educated blind people, he was always athirst for news; even the long war had its attractions for him, and by the help of his wife who formed armies of pins of various sizes, and stuck them on to an embossed map, he was able to make out the position of the various bodies of troops, and form some notion of their movements. So happy and full of sunshine was their married life, that even the sneering philosopher of Ferney told of its brightness, and Madame de Staël drew a picture of it in her novel, 'Delphine.'* But, happily for himself, and for the rest of the world, he had tastes for other things than military tactics; and his love for the country, and country pursuits, led him to study the little world of bees, to which the works of Reaumur and the conversation of his old friend Bonnet, the naturalist, still more inclined him. And it was

* In this tale, Huber, under the name of M. Belmont, thus speaks of his devoted wife :—"Elle a tout sacrifié pour moi, qui ne lui offrais qu'une suite de jours pendant lesquels il fallait tout sacrifier encore. Riche, jeune, brillante, elle a voulu consacrer sa vie à un aveugle sans fortune, et qui lui faisait perdre toute celle qu'elle possédait." —'Delphine,' Pt. III., Lettre xviii.

here, where the student has need of the keenest sight, that the blind man won his fame. In this his wife was ever ready to help him, but he had the special help of a faithful and sagacious servant, François Burnens, whose eyes Huber specially trained and taught for the work. At that time, he says, "J'avois pour lecteur un domestique, qui s'interessoit singulièrement à tout ce qu'il me lisoit. Ce n'est pas le premier example d'un homme, qui sans éducation, sans fortune, et dans les circonstances les plus défavorables ait été appelé par la nature seule à devenir naturaliste." He tried Burnens at first with little, simple, matters of observation, and in these the scholar succeeded admirably; and so by easy steps led him on to take exact note of things requiring minute and careful watching. His taste at last, says Huber, became "une véritable passion, et je n'hésitai plus à lui donner toute ma confiance; parfaitement assuré de voir bien en voyant par ses yeux." It is hard to form a just idea of the patience and skill with which Burnens carried out the various experiments. He thought nothing of watching the working-bees of a hive, which they suspected to be fertile, without cessation for twenty-four hours—without even food or rest, in order to surprise them at the time of

laying their eggs. "Often," says his master, "I reproached myself for putting his courage and patience to such a trial; but he was as interested as I in the success of our experiments, and counted pain and fatigue as nothing when compared with their results." "If, then," he generously adds, "there be any merit in these discoveries, I must share the honour with him, and I rejoice to render him this act of justice."

This is one more proof of Huber's truthful integrity, and it was, no doubt, in reference to Burnens that he used to say, "I am much more certain of what I state than you seeing people are, for you publish only what your own eyes have seen; I take the mean among many witnesses." To the same effect speaks Metcalf, the blind road-maker, when questioned as to the accuracy of his work; "You can have recourse to your eye-sight whenever you want to see anything, whereas I have my memory only, but *with one advantage;* you see things readily, and soon lose the impression; I with difficulty master a subject, and it is never obliterated."

This is what every really clever blind man is inclined to say, and taken "*cum grano*" it contains a truth which, in Huber's case, was proved beyond all

fear of challenge. At the time when he wrote, little was accurately known of the life and habits of bees, and, like every other enthusiast, in such a cause, he had to encounter the full tide of prejudice and ridicule which always besets bold investigation. It was hard to believe that a blind man had discovered facts which the wisest and keenest of sighted naturalists had failed to detect; and for a long time cold water was bountifully thrown on all that he had to say as a bee-master. But with the strong pertinacity of a blind man, conscious of his power, and convinced of the accuracy of his researches, Huber calmly held fast to the theories and facts which he had announced; gradually outliving both doubt and ridicule, and at last seeing his discoveries verified in almost every particular. He was the first to ascertain that the nuptials* of the queen bee are celebrated in the open air above the ken of ordinary vision, that wax

* "That the mother of so large a family,—says a charming apiologist,—and queen of so rich a store, passes her honey-moon somewhere may be reasonably supposed; but such is her innate modesty, that the time and scene of her matrimonial trip are still involved in some mystery. Whether she loves the pale moonlight, or, as Huber supposes, she prefers a bright May morning, and, Hero-like, lights her torch of love on high, she scrupulously shuns the curious eye of man." This mystery Huber was the first to clear up.

is produced from honey, that the queen is oviparous; that bees can at their pleasure by a special diet transform the eggs of workers into queens; and that some working bees can lay productive eggs. He pointed out clearly the use of antennæ for purposes of recognition and chat; and the origin of swarming; the influence that the dimensions of the cells had on the shape of the insects reared in them, the spinning of silk by the larvæ; and numerous other facts of their home life and work among the flowers—some of which had, indeed, been previously suggested, but the blind man was the first to demonstrate. He explained the nature and origin of propolis, as well as the escape of wax in flakes between the folds of the abdomen; and proved that the ventilation of the hive is carried on by the incessant tremulous motion of the bees' wings; testing his researches by some curious experiments on the germination and growth of seeds within a hive, which depend on the amount of oxygen contained in the air.

His own account of these researches is written with clearness and spirit, as if his own eyes had seen every detail, as a single paragraph will show. "Bees are not immediately aware of the removal of their queen; their labours at first are uninterrupted; they watch

over their young, and perform all their ordinary work; but, in a few hours, agitation ensues, tumult spreads throughout the hive. A singular humming is heard, the bees desert their young, and rush over the surface of the combs in delirious agitation. They find out that their queen is no longer with them. But how? How do they know she is not on the next comb? I know not; but I do know that on restoring her, tranquillity is at once restored. They *recognise* her. It is of no use to substitute another queen; if she is brought in within twelve hours of the removal of the reigning sovereign, they pay her no respect. But if after that time, any such stranger the bees treat as their own sovereign. They surround, seize, and keep her a long time captive, in an impenetrable cluster, where she sometimes dies either from hunger or want of air. On the 15th of August the bees had been without a queen for twenty-four hours, and I then introduced a fertile queen. Instantly, the workers near her touched her with their antennæ, and passing their trunks over every part of her body, gave her honey. The first set then gave place to others, who treated her exactly in the same way, all vibrating their wings, and ranging themselves in circles round her, as they retired. In a quarter of

an hour she began to move, had a guard appointed, and began to lay."

What writer with the sharpest ken could tell us more than this? And it is to be specially noted with what exact care and point he brings out the very details which the eye can best appreciate, for which of course he must have relied on others, and which his fellow students and readers, it is said, often received with doubt and jealous suspicion. For more than forty years his dear friends, the bees, occupied and repaid his unwearied attention; but, like a wise man, Huber had more than one string to his bow. He had some taste for poetry, and real skill in music, and to this latter pursuit he was indebted for many happy hours. He had a good voice, and was fairly acquainted with Italian music; with knowledge enough of thorough bass to harmonise a simple air on the piano, and skill enough to retain what he heard after one repetition. In these sunny hours he had the help of his wife and sister, as well as that of a lady herself blind, who to the last years of his extreme old age was among the dearest of his friends. He amused himself, too, with a small printing-press framed somewhat on the principle of a manifold writer, by the help of which he could print, fold, and

seal a letter for himself. Wisely, too, he persisted in taking daily walks about the country; his restless, energetic mind, soon growing weary of an inactive body. He even ventured alone into the fields, and by means of strings extended from point to point, and held in his hand, he managed to steer from place to place, a knot here and there reminding him of any sudden turning, or angle in the path. He was fond of ladies' society, and of pleasant voices; being himself always young and fresh in manner, and ready to converse with any one who fell in his way. "One thing," he used to say in his old age, "I am never able to forget, and that is how to love." He disliked, as most blind people do, to be pitied, or to talk much of his privation; but he never complained, and let the conversation be as varied, sober, or humorous as it might be, he could always hold his own. "He was not learned in the ordinary sense of the term, says De Candolle, "but like a skilful diver he had the happy knack of going to the bottom of his subject," whence he came back not without pearls. After the death of his wife, whose loss he felt most deeply, his years fell into a quieter channel, at Lausanne, under the care of an affectionate daughter. But, to the end, his life was

marked by the same cheerful light, content, and industry that adorned its fuller prime. The genial winter of old age found him as brave and serene as in the days when he first courted and won the heart of pretty Marie Lullin. His old habits, his old pursuits and pleasures still charmed him, and not long before his death his old passion for bees again peeped out, when Professor Prevost procured and sent to him a hive of the stingless bees, discovered by Captain Basil Hall at Tampico. It was a kindly, thoughtful act to the old blind naturalist, and as such he received it. His last days and last words were alike peaceful, and he died in December, 1830, at the ripe age of eighty-one, in full possession of all his faculties to the last.

CHAPTER X.

JOHN METCALF, THE ROAD-MAKER.

(Commonly called Blind Jack of Knaresborough.)

JOHN METCALF of Knaresborough really won and deserved the name of Road-maker; a title to which, one would imagine, a blind man would never aspire. Yet he was totally blind from his fourth year, from small-pox, and being the son of poor labouring people, had the scantiest advantages in the shape of education. But his parents must have given him what few blind children inherit, activity of body and mind, acuteness, mother-wit, and indomitable perseverance; all of which he possessed to an unusual degree. His life, of wonderful spirit and adventure, has been told by himself, with no great elegance, yet with truth and vigour; many of the facts being corroborated not only by people of his own locality, but by the actual roads which remain as proofs of his genius. Many of the roads over the Peak in Derbyshire were altered under his directions,

JOHN METCALF, THE ROAD-MAKER.*

* For permission to use this graphic Woodcut we are indebted to the ready courtesy of S. Smiles, Esq.

especially those near Buxton; but his greatest triumph perhaps was in completing the nine miles of the Manchester Road from Blackmoor to Standish Foot, for a considerable way across some deep marshes; and of this work it will be well to add a few particulars when we have glanced at his life.

From his very childhood he must have been a boy of untiring pluck and spirit; nothing daunted him, nothing was suffered to be an obstacle when he had once made up his mind to succeed. Not content with climbing trees, as other boys did, for birds'-nests, he often ventured on a bough which they feared to trust; he robbed orchards, he rode races with his companions at full gallop; and in a year or two could find his way through every part of Knaresborough without a guide. His father kept a horse or two, and Jack, thus able to get a mount, often managed in some way to join the neighbouring hunt of Squire Woodburn, and, as he said, "to see his hare killed." He not only learned to swim in the river Nidd, but would seize on his companions, plunge them below the surface, and in short swim over them; or if one sank to the bottom, Metcalf would dive for him and bring him safe to land. As he grew up, we find him with equal spirit and

equal success, earning money by playing the fiddle at country feastings, fairs, and waits; or during the season, at the Queen's Head, Harrogate; and for a wonder he was thrifty and saved money. He bought a horse of his own, and rode him at York Races, trusting, it would seem, mainly to his horse's sagacity both in the field and on the race-course,—which rarely failed him. Returning late at night to Knaresborough, he would serve as a guide to any who had lost their way; and it was on some such occasion that meeting a gentleman utterly unable to find his way along the intricate roads between York and Harrogate, Jack offered his services. They were both on horseback, and Metcalf took the lead. All went well for a considerable distance, until they got near to a gate on the Knaresborough road which the guide was afraid of missing. But here his quick wit did him good service. A current of wind through an opposite park-gate (of which he knew the position) told him where he was, and he at once turned his horse's head to the entrance he sought for. It was a difficult gate to open; and Metcalf at once threw the blame on his horse, "Confound thee!" said he, "thou always goest to the heel instead of the head."

Whereupon, the stranger observed that his own horse was good at coming up to a gate, and at once, to his guide's satisfaction, opened it; and so they made their way on towards Knaresborough. Passing through the town, they entered the forest, then unenclosed, and before long arrived safely at Harrogate. Metcalf knew the inn well, and quickly led both horses into the stable, and then going back into the house found his companion at the bar, busy over a tankard of negus of which he offered some to his guide. Jack took the tankard readily the first time, but his second attempt being rather wide of the mark, he left the room. "He's been drinking," said the traveller to the landlord, "that's clear, and I see it in his eyes." "Eyes," replied Boniface, "what do you mean by eyes? Don't you know that he is blind?" "*Blind!*—landlord—no, no; have him in." Metcalf was soon called, and told his own story. "Had I known you were blind," said the stranger, "I would not have ventured with you for a hundred guineas." "And I," said Metcalf, "would not have missed my way for a thousand." And then host, traveller, and guide, set to work on a good supper.

In some adventures or other of this kind he was

continually engaged, and always managed to come out of them with success. Though he was stone-blind, he was always ready to join in sports and games which at first sight seem utterly beyond the reach of a blind man. He was a clever whist player; he played well at bowls, receiving the odds of a bowl extra for each eye; and thus having three chances to his opponent's one, by placing one friend at the *jack*, and another half-way towards it, he managed to judge well of the whole distance. He was a good wrestler and boxer, and standing six feet two in his shoes, few dared to enter the ring with him, far less to attempt playing any practical joke with him as a blind man. At all these sports, as well as cock-fighting, he betted freely, and seems, with the help of a friend, in most cases to have come off the winner; some sharp fellows, no doubt, being ready enough to bet with a man who, from his affliction, must be supposed to know less than they did of the sport. On one occasion he even ventured to ride his own horse at Forest Moor Races, and gained the wager. The race was on the open down, and posts were set up describing a circle of about a mile, the course being thrice round the circle, to which it was supposed

that a blind rider could not possibly keep. But Metcalf stationed a man with a bell at each of the posts, and by clever management and a quick ear contrived to keep fairly to the course, rode well to the front, and amidst the shouts of all but his opponents came in first by a good length. Clever as a jockey, he gradually gained a knowledge of horse-flesh, buying and selling horses, with profit to himself, even in canny Yorkshire. In this way he became more and more widely known throughout the county, and being full of spirit, of good address, a strong arm, and a stout heart, he soon grew to be a favourite among the fair sex; and especially with one Mary Benson, daughter of the landlord of *The Granby* at Harrogate. She was a fine dashing girl, and really loved him when he scarcely had courage to declare his passion. But they soon came to an understanding; and as her mother was strongly opposed to the match, many a device was used to keep secret their affection, and to contrive opportunities for meeting. This was done for a time, when Metcalf having been called away on business, advantage was taken of his absence to bring forward a rival suitor; and so well did he prosecute his suit that the banns were published and the wedding-

day fixed, just as poor Jack came back to Harrogate, little knowing what had happened. Indeed, he was riding by the inn on the very day before the marriage, when a stable-boy whispered into his ear the mysterious message, "*One wants to speak with you.*" He well knew who the "*one*" was, and very soon had heard the whole story. An elopement was planned for that night, carried out with great spirit, and resulted in a happy marriage the next morning; to the great chagrin of Mr. Dickenson, his rival, who had prepared a feast for two hundred people, and the great anger of Mrs. Benson, who refused either to see the bride or give up her clothes. The old lady kept to her bitter vow till the birth of her son-in-law's second child, when like a true woman she stood sponsor to her grandchild, and gave up the bride's dowry. When Mary was asked how she came to refuse so many good offers to marry a blind man, she replied, "I could not be happy without him; his actions are so singular, and his spirit is so manly, that I couldn't help liking him." She made Metcalf an excellent wife, for forty years; dying in the year 1788, and leaving him with four children in his sixty-first year.

These forty years were spent in an infinite variety

of adventures, all curious, and many of them almost incredible in the life of a blind man; among which not the least curious is that of his joining the army. At the breaking out of the rebellion in 1745, one Captain Thornton resolved to raise a company at his own expense, and invited Metcalf to join the troop. "Jack" set to work with his usual spirit, and, acting as assistant to a sergeant, in a couple of days collected about a hundred and forty volunteers, of whom sixty were drafted into the army then under General Wade. The blind man acted as bugler, was present at several of the engagements which followed; and, not without many adventures, after the fatal battle of Culloden, found his way safely back to Knaresborough, where he seems to have settled down to a quieter life. At the previous battle of Falkirk Metcalf ran some considerable risk of his life. "It was," says his biographer, Mr. Smiles, "a grossly mismanaged battle on the part of the Royalists, and the result was a total defeat. Twenty of Thornton's men were made prisoners with the lieutenant and ensign; the captain himself only escaping by taking refuge in a poor woman's house at Falkirk, where he lay hid for many days." When Metcalf got back to Edinburgh

with the defeated army, some of the dragoon officers, hearing of his escape, sent for him to Holyrood, to question him about Thornton. They clearly thought to have some fun with him about his own escape; but Jack's ready wit never failed him. "How did *you* manage," said one, "to escape safely?" "Oh," was the ready answer, "it was easy enough to follow the sound of the dragoons' horses—they made such a clatter over the stones when flying from the Highlandmen."

Meanwhile nothing had been heard of Thornton; and Metcalf, who was much attached to his captain, beginning to be anxious about his fate, determined to go back to Falkirk for tidings. He arrived safely at the outposts of Prince Charles's camp, and by joining one of the rebel spies, and pretending that he wished for employment as a musician in the service, made his way at last to the royal head-quarters. But of the captain nothing could be heard, and Metcalf, being unluckily recognised by some camp-follower who had seen him at Harrogate, was seized on as a suspicious character, put into prison, and brought to a court-martial. But no evidence could be brought against him; he was released, at length, made his escape from the camp, and got back to

Edinburgh, where, to his great joy, he found his captain alive and well.

In January, 1746, the Duke of Cumberland, in full pursuit of the Highlanders, halted at Aberdeen, where a ball was given by his officers; and Metcalf's services again came into requisition for the music of the country-dances which he only could play. And here, it is said, he played with his usual spirit for eight hours at a stretch, standing on a chair, and attracting the notice of the Duke himself, who next morning sent him a couple of guineas, which, however, Metcalf spent on a treat to the Duke's servants.

This taste of military life seems to have been quite enough for him; and his next adventures in the woollen trade to and from Aberdeen, in the buying and selling of horses between Yorkshire and Edinburgh, and, if report speaks truly, in a little clever contraband trade which he carried on in various parts of the country, were all of a far quieter kind. But all these occupations made him more and more thoroughly acquainted with the state of the northern roads; and whether "as a guide to those who could see, as a musician, soldier, chapman, fish-dealer, horse-dealer, or waggoner," his experience was gradually ripening for the great work of his life. "He could

measure timber," says his biographer,* "or hay in the stack, and rapidly reduce their contents to feet and inches after a mental process of his own." Nor can there, indeed, be any doubt, that if he had not lost his sight, he would have been one of the most remarkable men of his age; and, as it was, he soon "became one of the greatest road-makers and builders." Having once made up his mind to undertake the business of road-building, he proceeded with his usual impetuosity. His first essay was to take the contract for three miles of new road between Minskip and Fearnsby, which he completed with unusual despatch and economy, to the entire satisfaction of his employers. He afterwards built bridges, repaired roads, or built new ones, with equal ease, despatch, and economy; and was able to boast, without fear of being challenged, that his work stood the test of time and heavy traffic when that of other contractors had utterly failed. "The total extent of turnpike-roads thus constructed by him was about 180 miles, for which he received, altogether, about sixty-five thousand pounds." And in all these undertakings he not only planned and originated the whole

* Smiles's 'Engineers.'

scheme, but by his own personal exertions among the workmen brought in that element of living vigour without which lasting success rarely comes. He thought nothing of walking to Knaresborough in the morning with four or five stones of meal on his shoulders, and joined his men by six o'clock, going from place to place, and busily superintending throughout the day. "Many a time," says Dr. Bew, "I have met this extraordinary man traversing roads, ascending steep and rugged heights, exploring valleys, and investigating their extent, form, and situation, so as to answer his designs in the best manner; his plans and estimates being all prepared in a method peculiar to himself, of which he cannot well convey the meaning to others. And so great are his abilities, that he finds constant employment. He is now constructing a new road between Wilmslow and Congleton, to open a communication with the great London road without passing over the mountains. I met him while engaged in making this very survey, and it was astonishing to hear with what accuracy he described its course and the nature of the different soils through which it was conducted, specially mentioning one boggy piece of ground, "that it was the only place he had any doubts of, where he feared

they had, contrary to his directions, been too sparing of their materials."

This mention of boggy ground naturally brings us to notice the famous nine miles of road which he made from Blackmoor to Standish Foot. The surveyor had laid down the line of road across some deep marshes, out of which, said the trustees, the soil would have to be removed till they came to a solid foundation. This plan appeared to Metcalf difficult, tedious, and expensive; and he did his very utmost to persuade the trustees of the justice of his opinion. But the trustees of the country-road were as impracticable as such men usually are, holding to their own opinion, until Metcalf proposed to make the road, by a route of his own, across the marshes, after his own plan; and if that failed, to make it anew after the surveyor's, at his own cost. To this they agreed; and Metcalf having engaged to finish nine miles in ten months, began his work in six different parts, with nearly four hundred men, one of the worst places being across Standish Bog, where no road seemed at all practicable. The first part of his plan was to cut a deep canal on either side of the proposed road, throwing the soil as it was cleared out on to the roadway. He then ordered his

men to collect a quantity of heather or ling, and bind it in bundles which could be spanned by the hand. These bundles he laid down firmly side by side, with another row laid transversely above them, and then overlaid the whole with stony rubble and gravel, laid on from broad-wheeled waggons, and thoroughly pressed down to form a level road. This formed one of the driest and best portions of the whole route, and for twelve years needed no repair, its main principle being the very one long afterwards adopted by the famous George Stephenson in carrying the rails across Chat Moss.

The last road that Metcalf built was between Haslingden and Accrington, in 1792, when he had reached his seventy-fifth year, and was still hale, hearty, and of lusty strength both of mind and body; as full of life and vigour as most men at forty. He spent the last years of his long life in his quiet farm-house at Spofforth; and there, at length, at the patriarchal age of ninety-three, he finished his event-ful life in the year 1810. He had many children, and the kindly hands of friends about him to the last, to all of whom he seems to have been dear. Ninety great-grand children are said to have sur-vived him. A few old people are yet to be found

in the neighbourhood who still remember the famous blind man. One recalls his poking about with a long stick, and by a happy knack finding out all the places in the road which needed mending; while another still bears in mind (ætat. 89) the day when she, as the landlord's daughter, waited on "Jack" at the village inn, and was once greeted with, "Here lass, come and have a game wi' me, an thoo'l be able to say when thoo's an auld woman, thoo's played cards wi' Blind Jack." The memory of such a man lingers long in his native place. There have been blind men of greater genius and more showy acquirements, but as one who by dint of resolute pluck and indomitable perseverance, unwearied industry and unbroken cheerfulness, resolved not to be cut off from the works and ways of seeing men, John Metcalf of Knaresborough stands almost alone.

CHAPTER XI.

JOHN STANLEY, THE BLIND MUSICIAN.

IT is much to be regretted that few particulars can be gathered as to the life of John Stanley, the blind musician, for he is one of the few such musicians who seems to have possessed real genius, as distinguished from merely mechanical skill. James Wilson, his biographer (himself blind), opens his short sketch, after the usual random fashion of blind critics, and having first given utterance to a doubt whether "the English have any national music," and admitted that "they are by no means unacquainted with the principles of that delightful science," calmly informs us that, "as a composer, few could equal" his hero, "while as a performer he had perhaps no superior."

Stanley was born in the year 1713, and within two years of that time became totally blind by falling heavily on a stone floor with a china basin in his hand, portions of the broken china cutting open his face

and fatally injuring his eyes. How he spent his childhood, what education he received, or where he received it, is not known. But at seven years old we find him busy enough at music, learning the organ first from John Reading, a pupil of Dr. Blow's, and then, with still greater and more rapid success, studying it under Dr. Green. He took intense delight in all kinds of music, and, when a boy of only eleven, was remarkable for his ready skill as a player among a wide circle of friends. Gradually the circle expanded, and having in 1724 obtained the post of organist at All-Hallow's, Bread-street, two years later, when in his fourteenth year, he was chosen out of a host of candidates to take the like post at St. Andrew's, Holborn. Here he had a noble instrument, and this he learned to manage with such exquisite skill as attracted and delighted thousands beyond the ordinary congregation, including some of the first musicians of the day. Nor was he known merely as an organist. He was the conductor of many well-known public concerts,* and when blindness befell Handel, assisted Christopher Smith, the great musician's pupil, in superintending and conducting the

* Mr. Wilson says, "their soul."

performance of his famous oratorios during Lent; and this he continued to do for thirty years, long after Handel's death, almost up to the time of his own decease in 1786. He also held the office of Master of the King's private band, and clearly worked as hard at his profession as could be expected of a blind man; and thus for a time made himself known among the fashion of London. But it is more than doubtful whether his two famous oratorios, 'Jephtha' and 'Zimri,' his 'Solemn Ode' on the Death of King George II., or his dramatic Pastoral of 'Arcadia,' are known even by name to the keenest and best-read of modern musicians; though the Pastoral was performed with some degree of state at Covent Garden just after the marriage of George III. and Queen Charlotte. His compositions must, we suppose, have lacked that living element of originality and sparkling freshness which marks all genius of the highest rank. Of his masterly skill in the management of the organ, one single incident is a sufficient proof. At a public performance of one of Handel's 'Te Deums' the organ was found to be half a note too sharp for the other instruments in the orchestra; whereupon Stanley, who was conducting the music, instead of requiring that the violins should be screwed

up to the organ's higher range, at once, without premeditation, transposed the whole piece to suit them into a lower key. This was the more remarkable because the new key was the remote one of C sharp major.

No wonder, therefore, that thousands often crowded to St. Andrew's and to the Temple Church to hear the famous blind man; nor are we surprised to find his pupil, Dr. Alcock, saying, "It was common enough in my day, just as the service at St. Andrew's or in the Temple was ended, to see forty or fifty organists near the altar eagerly waiting to hear his last voluntary; and even Handel himself was often to be found among them."

Stanley possessed the blind man's usual facility in at last finding his way alone about the different parts of the city where his work called him; and this knowledge, says Alcock, extended "even to Westminster and the adjacent villages." So keen and correct was his ear, that he never forgot the voice of

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* Some years after Handel had become blind, he was recommended by Dr. Sharpe to get the help of Stanley in playing the organ at his Oratorios. "No, Doctor, no," was the reply; "you have forgotten where it is written, 'If the blind lead the blind, both shall fall into the ditch.'"

any person he had once heard speak, and, like Blind Tom, would accompany with thorough bass any air on the piano, though heard for the first time. Walking through Pall Mall in 1799, he was met by a gentleman who had been in Jamaica for twenty years, and in passing said, in a feigned voice, "How do you do, Mr. Stanley?" The blind man hesitated but a moment, and then quickly answered, "God bless me, Mr. Smith! how long have you been in England?"

Like Metcalf, he was a good rider, and when living at Epping knew many of the roads through the forest, and could point out all the famous views to his friends. He was a good whist-player, the cards being finely marked for him at the corner with a needle; so finely indeed that it was not easy to see the marks which his keen touch at once detected; while even at billiards and skittles he often beat his companions.

He died in May, 1786, and was buried at St. Andrew's, Holborn. Partly a cotemporary of Stanley's, and in England during a part of his career, was another famous blind musician, Mademoiselle Theresa Paradis, an Austrian lady, who at the age of two years became blind from excessive fear at an outcry of fire and

murder, suddenly raised at midnight in her father's house. She showed great taste for music from an early age, and at ten years old could play with skill and ease on the piano and organ; being able to sing in the 'Stabat Mater' of Pergolesi at St. Augustine's before the Empress. In 1780 her fame as a musician had spread more widely, and she visited the chief courts and cities of Europe, where her playing attracted great notice. She arrived in England during the same year, and played before their Majesties at Windsor, as well as at many public concerts. Cramer, himself a masterly musician, took great interest in her career, and was charmed with her playing; but Madame Paradis seems to have had little skill as a composer, and has left behind her no record of her genius. It was partly to see Stanley that Joseph Strong, the blind mechanic and organ-builder of Carlisle, while quite a youth, made his way on foot from Cumberland to London, and with Stanley's help gained further insight into his trade, by examining some of the great organs of the metropolis. Strong lived to build several organs after his trip to London, and one of these is still said to be in existence in the Isle of Man.

It was in 1752, when Stanley was in his fortieth

year, that the great musician Handel himself became blind from gutta serena. 'Jephtha,' the last of his great works, was, indeed, the "Song of the Swan;" it had been slowly finished in the preceding year, his sight failing him as he filled up the orchestral parts of the Third Act, of which the manuscript still remains to show that his vision was no longer clear when he traced the last notes. He was couched three times in 1752 by Bramfield, Surgeon to the Princess of Wales, but all in vain. He who had with such solemn and intense pathos sung the darkened sorrow of the Israelite, blind, desolate, and in prison, now fell into the darkness himself. The blow, at first, affected him most deeply; but gradually the good old man revived, his faith and courage never failed him, he grew resigned, and resolved to continue his oratorios. In the course of the next year, 1753, 'Samson' was performed, and the author, who was present, in spite of all his moral courage, could not listen unmoved to the passionate sorrow of "Total eclipse! No sun, no moon!" And then it was the audience perceived the grand old man, who was seated at the organ, grow pale and tremble at the power of his own music; and with many cries of applause, and many unbidden tears, he was led for-

ward to the front of the orchestra, and welcomed with the loud, but respectful, homage of the whole assembly. He lived for six years after this, all marked by the same noble resignation and courage; still earnest in his passion for music, and still conducting his oratorios, up to the very date of his death, April 13, Good Friday, 1759; on the 6th of which month he had himself conducted his masterpiece, the 'Messiah,' at Covent Garden. A week later his pupil, Smith, took his place as conductor to the same oratorio at the Foundling Hospital, which the managers calmly announced by inserting in their advertisement the words "in place of the late G. F. Handel, Esq." On the 24th of May, however, it occurred to these gentlemen that a word or two in memorial of Handel would not be out of place, and they accordingly advertised a "*Performance of Sacred Music in grateful memory of G. F. Handel, Esq., under the direction of Mr. Christopher Smith. Mr. John Stanley will also perform a Concerto on the Organ.* Gentlemen to come without swords, and ladies without hoops."

It was at the Foundling that during the following years this same oratorio was performed nine times by a full orchestra, with Stanley at the organ; and never,

we may be sure, without a kindly remembrance of his sturdy and faithful old friend the author.

Handel was buried on the 24th of April, in Poet's Corner, in the presence of a great concourse of people of all ranks, his funeral sermon being preached in the Abbey by the Bishop of Rochester.

In spite of his occasional roughness and coarseness of speech, there can be no doubt that he was at heart a deeply religious man. It is said, on good authority, that he never sat down to work at the 'Messiah' without prayer to Him whose name it bore; and when engaged in the great Hallelujah Chorus, he says in his broken English, "I did think I did see all heaven before me, and the great God himself."

Some days before his death he expressed a strong wish that he might die on the Good Friday, "that he might be with his dear Lord and Saviour on the day of His resurrection;" and the consolation was not denied him.

CHAPTER XII.

NICHOLAS SAUNDERSON, THE BLIND MATHEMATICIAN.

SAUNDERSON was born at Thurlston, in Yorkshire, in the year 1682, and when but a few months old lost not only his sight, but his very eyeballs, by the small-pox; so that no recollection of light, or any seen object, could have availed him in after life. His father was a shrewd, hard-headed, exciseman, of small means which hardly sufficed for the support of a large family. But he did what he could for all of them, and especially for Nicholas, his blind son, who was sent to the Free School at Pennistone, and there managed, in spite of his blindness, to pick up a sound grammatical knowledge of the Latin and Greek languages; as well as some mathematical knowledge, for which, from the very first, he showed great aptitude. Under his father's teaching at home the boy soon learned to master the common rules of arithmetic,

and there were few questions which he could not at once solve in his head by dint of a clever memory. Gradually such questions took a higher and wider range; no ordinary difficulties puzzled him, and if a common rule did not satisfy or please him in dealing with a difficult problem, he often invented a new one for himself. In his eighteenth year he had made such progress as to understand with ease the works of Euclid, Diophantus, Archimedes, and Newton, in their original languages; and such books as his father could not procure he was fortunate enough to obtain from friends, who, perceiving that they had to deal with a man of high intellect and genius, did all they could to help him on his way. Among these were a Mr. West, of Underbank, and a Dr. Nettleton, who not only supplied him with all necessary books, but had him instructed in the higher branches of Algebra and Geometry. Thus stimulated and thus helped, genius like Saunderson's soon began to bear fruit, and ere long the scholar had surpassed his teachers. He seemed at times to arrive by a sort of instinct at results to which they could but point a narrow, long, and intricate path; and to solve by intuition problems which others had to deal with by strict rule.

For a time, after this, he was sent to a private

school at Attercliffe, near Sheffield; but logic and metaphysics—the two chief studies there—were not to his taste; and he went back to his own home, resolved to study, after his own fashion, the subjects to which his special taste and genius led him. Books and a good reader were his chief wants, and these his father, the exciseman, did his utmost to supply, and with the help of friends succeeded. After a few years of quiet, diligent, study, during which Saunderson's fame as a mathematician became more and more widely known, he gained the friendship of Joshua Dunn, a fellow-commoner of Christ's College, who generously took him to Cambridge, and obtained permission for him to reside in the College, though he was not admitted as a member of the house. Here he had books in abundance, abundant leisure for quiet study, and teachers well able to assist him if he needed help. It was soon found, however, that the blind man needed no help; on the contrary, that he could teach others, even in the highest range of mathematical science. His next step was to give Lectures on the Newtonian Philosophy, which he did with brilliant success to a large class of students; with the free permission and good-will of Whiston, then Lucasian Professor of Mathematics, and the

approval of Sir Isaac Newton himself, whose friendship he had just gained.

The Blind genius was now rising to his due position; and his power as a teacher began to be known and felt in the University, until the year 1711, when Whiston was deprived of his office for holding certain heretical opinions, and by the interest of Newton Saunderson was chosen to succeed him. Queen Anne was applied to on the blind Professor's behalf, and a royal mandate readily granted for conferring on him the degree of M.A. necessary to qualify him for the Professorship. His Latin inauguration discourse is said to have been remarkable for its classical purity, and to have smacked far more of Cicero than the language of the mathematical schools usually does; though no trace of the oration is now to be found.

He now gave himself up more keenly than ever to the duties of his office, and for the succeeding twelve years continued to reside at Christ's College, winning higher and yet higher fame as a teacher. In 1723 he took a house in Cambridge, and there began his married life; his wife being the daughter of a Mr. Dickens, the Rector of Coxworth, a lady with whom he had previously been long acquainted, and by whom he had two children. Whether the union

was a happy one, and whether his married life was of cloud or sunshine, no record remains to tell us; but, in any case, it was not a lengthy one; for in 1739 some scorbutic affection of the blood suddenly increased upon him, and, after a short illness, he died at Coxworth, and was buried in the chancel of the parish church, in the fifty-seventh year of his age. Mathematics had been the great passion of his life, and to this study he had given his time, thought, and strength. The sedentary nature of these pursuits, and of his own habits as a blind man, no doubt helped to bring on the disease; and the natural tendency of his mind seems to have been towards the gloomy regions of doubt and melancholy. He at times, too, fell into excess in matters of drink; drawing, however, it would seem, not so much mirth and jollity from the festive board, as moroseness and passionate discontent. He was fond of society, and nothing pleased him better than the converse of men of real learning and intelligence. Full of wit, and at times even of vivacity, himself, he relished these qualities in others; but he often expressed himself with too much freedom to make new friends, and too little care to retain old ones. Many people admired, but few loved him. He prided himself on always

speaking the truth, on all occasions, to all he met; a noble ground of satisfaction. But he forgot that it is not always necessary to *speak*. Silence is sometimes golden, especially when he who breaks it is given to sarcasm.

A man indulging in such habits, and of such a temperament, is not likely to make the most of what little sunshine befalls him, but rather to look at the gloomy side of the hedge, and to take the gloomier path; and this Saunderson seems to have done. What his death-bed was like has been seen at a previous page, and there is little doubt that the picture is, on the whole, a true one. Sunsets of this kind follow but one kind of day.

Had Saunderson married, when young, such a wife as her whose heart was won by Francis Huber, he might have been a wiser, happier man, and a truer Christian. He needed the loving affection of a genial woman to mould and soften him into sunshine and good humour with himself, and to living trust in God. He would then have learned to play the organ, instead of a piping flute, and used his senses of touch and hearing, which were of wonderful acuteness, not simply to display his own dexterity, in detecting spurious coin, or the one note in a chord that erred by

one-fifth of a tone, but to find out and rejoice in the ring of true metal, the golden harmonies of life, the small courtesies, the trifling kindly acts and words which crown and complete all human happiness, and bind man to man in its enjoyment.

Saunderson had in him some of the parts which make a great and a good man, but he lacked the one element of love and living faith. To many an ardent, eager, student he opened wide the gate of science, and showed the silent, cold, domains of thought beyond. But in all that he did for others, in all his labours, studies, and success, one object seems chief and first, and self never to have been forgotten in the greatness, or beauty, or wisdom of his achievement. Almost the only record of his genius is an Algebra (1740), which is now out of date and almost unknown, though the writer of it occupied a chair once filled by Sir Isaac Newton at one of the first Universities in the world.

CHAPTER XIII.

IN conclusion, it only remains to notice one or two points in which, during the coming years, it is to be hoped that science and invention will do more for the education of the Blind than they have yet done.

And first, as regards embossed printing. There can be no reasonable doubt that the Roman letter is the type best adapted for general use, on every possible ground. All we need is (1) some slight modification of it, which shall enable the finger of the blind boy to distinguish readily between those letters which to his touch are closely alike, such as R and B, G and C; (2) the invention of some easier and cheaper plan of embossing than that now in use —either, as at present, on paper, or on some similar material equally ready to receive impression, far cheaper, far more durable, and not liable to crack.

In the matter of writing, the blind boy needs some simple modification of Hughes's 'Typograph,' far less in price, and less likely to get out of order. The simple embossing frame, described at a previous page, will do well enough for all the ordinary purposes of a short note; but a letter of any length involves the expenditure of a large amount of time, and the use of many sheets of foolscap-paper.

Thirdly, with regard to the type used in embossing and in ciphering, all that is needed is that the letters should be cast in one solid piece of metal, instead of being formed of wood and iron, as at present; and that the figures should be made of cheap printers' type-metal, instead of brass.

When these improvements have been effected, and the whole of the Books of the New Testament have been well printed in the Roman letter, together with a score of compact, handy, volumes of History, Travel, and good, healthy, Fiction—at a price within the reach of the poor blind man—the educational work of the English Blind Schools will be carried on, as it should be, with ease and efficiency and made to bear abundant and lasting fruit.

At the close of such a work as the present, some readers might naturally expect to find a chronologi-

cal list of famous blind men; and it was the writer's intention to have gratified so reasonable an expectation. But, after some considerable research, the materials for any such list were found to be of so scanty and imperfect a kind; so many periods occurred during which apparently not a single blind man of note came to the surface—and, with regard to so many names, the difficulty of fixing their exact date was so great—that the attempt had to be given up. Nor, indeed, were these the only difficulties which beset such a task. Authorities differed even as to exact names, rank, profession, and birthplace; while no distinction was drawn between the sufferers who were blind from birth, and those who lost their sight in after years of youth, or manhood.

Again, in all lists such famous celebrities as Milton and Homer appear simply as blind men, and are constantly thus cited as two of the greatest poets the world has ever seen. Milton's case has been already disposed of as on a par with that of Professor Fawcett; and to these may be added the name of Mr. Gale, the famous inventor of the non-inflammable gunpowder. He is probably one of our shrewdest men of science, and a first-rate analytical chemist; but, in no sense, to be counted as a blind man. He has, we believe, lost his

sight but for a few years; he laid up all his wonderful store of knowledge, and acquired all his skill as a manipulator, when he had the full use of a pair of keen eyes; and, having once achieved this position, he was not to be driven from it by mere loss of sight. Facts like these redound to the infinite credit of such men as Messrs. Fawcett, Gale, and Prescott; but they prove that neither of them can justly be cited as a blind man who has won his laurels under "the cloud of ever-during dark."

As to Homer, the ground for believing that he was a blind man at all crumbles into dust at the very first touch. The wonderful beauty and distinctiveness of the Homeric descriptions leads Cicero, in a noble passage of the 'Tusculan Questions,' to contend that he, who though blind could so represent every object as to enable us to see what he himself could not see, must have derived great pleasure and enjoyment from his inward sight. This is all true enough, as far as it goes; but there is far more truth and more point in the idea that a man who could thus describe the natural beauties of land and sea, of cloud and sunshine, forest, hill, and plain, must himself have seen what his words describe with such living force and beauty. "There is," says a keen

critic,* "far more reason in witty old Velleius, who asserts that, if any one supposes Homer to have been born blind, he must himself be destitute of every sense. For never was a fable more repugnant to truth than that of Homer's blindness. It originated, probably, in the identification of the author of the 'Iliad' with the author of the 'Hymn to Apollo,' and was then fostered by the notion that Homer designed to represent himself under the character of Demodocus in the 'Odyssey.'" Milton, indeed, has made a fine use of Homer's blindness; but, looking at it as a fact, one might as reasonably believe that the sun is blind, as that Homer's eyes were closed against all the vivid scenes of joy, beauty, horror, peace, wonder, or misery, with which his poems abound. Out of a hundred epithets which might be chosen to prove this, the few that relate to morning alone are more than sufficient to show that he must have seen all the glorious beauty of a summer-dawn thousands of times, ere he could have coined such choice and glowing words as *ἠριγένεια*, *κροκόπεπλος*, and *ῥοδοδάκτυλος* (sprung from the dawn, saffron-robed, and rosy-fingered); "out of

* Hare's 'Guesses at Truth,' p. 41.

which," says the same writer, "have sprung nearly all the poetical descriptions of Morning ever since Homer's day." And, turn where you will throughout his wondrous poem, it is to the eye that he constantly appeals for his highest and noblest similes. Thus Achilles, when Briseis is taken from him, sits apart by himself, gazing on the *dark gloom, the purple,* of the distant sea, while it dashed and foamed at his feet. A bright blue sea would have been utterly out of keeping.* So, when Apollo comes down from Olympus, in anger, to avenge his insulted priest, he comes *νυκτὶ ἐοικώς, like the night;* and when divine Thetis rises from the sea to listen to her son's complaint, she rises *ἠΰτ' ὀμίχλη,* as *a silvery cloud.* And in both these latter similes, Homer is wonderfully superior to two of our greatest modern poets, who, with far less felicity, have used both his images. Thus Milton, speaking of Pandemonium, says it

"Rose like an exhalation from the earth."

while Coleridge, in his 'Ancient Mariner,' tells us that he passed

"Like night from land to land."

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* Hare, p. 40.

Had Homer never written, both these applications might have done more than pass muster; but, when traced to their birthplace in the 'Iliad,' they shine out with redoubled grandeur, fitness, simplicity, and grace. In the 'Ancient Mariner' there is a weird, mysterious power of wandering, restlessly, from land to land, but neither might nor terror; while in Phœbus Apollo there are both. He comes swiftly down from the tops of Olympus, with all the silent power and majesty and terror of Night, a silence unbroken but by the clang of his silver arrows. And when the Goddess rises from the silver sea, she rises with all the soft, shadowy dimness of an exhalation which far better becomes her than the appearance of the hard, stiff, outline of a grand and massive temple.

From any list of famous blind men, therefore, we take Homer to be excluded; and assign to him his high place of supreme renown among the immortals as a poet, but not as

"The blind old man of Scio's rocky isle."

We have already, in many previous pages, glanced at the numerous deprivations under which the blind man labours, and the many objects and sources of

joy and beauty from which he is thus cut off. But some of these deprivations may be, in a great measure, modified; and the question has often been debated whether the blind man or the deaf-mute is really in the more afflicted condition. At first sight, the natural impulse would lead one to suppose that the condition of the blind man is by far the more deplorable of the two; that his isolation from the rest of the world is more complete, and his positive privation more severe. But, no one who has ever really known an educated blind man in society will again incline to any such opinion. There are few persons, in whose circle of acquaintance one or two such men are not to be found; and among them some of decided talents and considerable acquirement in literature or science. But, if we turn to the ranks of the deaf-mute, no such men of acquirement can be found. In fact, not a single name of note is to be found in the annals either of the past or of the present time. It is true that the deaf-mute can see all that is going on about him; but, in a very large portion of what is going on, he can take only a most imperfect part, if any share at all. From the whole world of sweet sound he is utterly barred out for ever; while the divine gift of speech,

which distinguishes man from all other and inferior creatures, is entirely denied to him. He can communicate with friend, relative, or companion only by imperfect signs and gesticulations, and the pleasant words of social converse are to him totally unknown. It is true that he may learn to write, or even to decipher the names of letters and the construction of words, but his range of acquaintance with them must be narrow, and his knowledge of them clearly imperfect. No strain of music can soothe his troubled heart, no familiar voice can greet his weary ear. In the midst of thousands, he may be as utterly alone as if in the most distant solitude; and, whatever he may learn to do with his hands, the higher powers of his mind will not only fail of their full use, but be left unroused, unconscious, and half-dead, because of his fatal deficiency in the want of speech.

But, with the blind man the whole case is totally different. Having the free gift of speech, and being able to some extent to read the words of other men, and without restraint to hear read—and to gain full knowledge of—all that the greatest, wisest, and best of men have ever written, he enters into the society of his fellow-men as fully and freely as if gifted with

the keenest vision. Nothing delights him so much as a good chat, a lively discussion, or a sharp tournament of contending critics. The whole world of sound is open to him, with all its special speaking, joy, and beauty; and even the highest domain of all, the silver paradise of Music itself opens to him her fairy gates, a new guide takes him by the hand, and under her glowing, joyous sway he travels swiftly to the lands where Faith is even greater than sight. Under her happy guidance we must now be content to leave him.

A single passage from the words of a famous blind man,* who lost his sight when about twenty years of age, strongly corroborates the truth of the previous remarks. "I can," says Holman, "still enjoy society and take a part in every ordinary occupation of life, with as much facility and pleasure as previous to my calamity, with the exception, perhaps, of reading, or going about by myself in a strange place. It may be supposed that I sustain a great disadvantage in not being able to observe the countenances of those with whom I converse; but this is by no means so important to me as persons are apt to imagine, for

* Holman, the blind traveller.

the tone of voice, the manner, and my own imagination combine to compensate for the deficiency. And, above all, we have the universal sympathy and kindness of the rest of the world. With the deaf and dumb the case is reversed, not from the intentional neglect of the world, but because it is so difficult to entertain them without wholly concentrating general attention, a consideration which is of itself sufficient to deter most persons from the attempt. Hence the deaf, being involuntarily shunned, learn to look on society with invidious eyes; the mirthful they regard as satirists, the grave as detractors, and all the world as estranged from them."

It must be added that Holman, after he became blind, visited almost every part of the known world, and has written a very intelligent, though lengthy, account of his travels.

Holman, however, it must also be remembered, did not lose his sight until he had reached early manhood, and had seen service as a Lieutenant in the Navy. His whole after career is very remarkable and very interesting; but it must not be taken as that of a man born blind. His activity, his curiosity, his daring courage, and his determination to be a traveller, were all doubtless firmly established in him long

before he lost the use of a pair of good eyes; and blindness was not the cloud deep enough (deep as it is) to blot out all his earlier pursuits and passions. His life cannot be counted among those of famous blind men, though a well-written sketch of him and a summary of his travels would make a very pleasant and readable volume.

But, however well Holman may have managed as far as the outward passage through life is concerned, and whatever may have been the achievements of other famous blind men in the world of science, nature, or musical art,—it is still to be remembered, in spite of all that can be done for them, that the great majority of the Blind do, more or less, dwell in a separate and peculiar domain of their own. However we may try to lessen the sharpness of the line which divides them from the seeing world, still they *are* divided, and, at certain times, stand as it were aloof from the multitude of seeing men. As we have seen in previous pages, they are utterly barred off from a thousand channels through which intelligence from the outer world speaks with silent yet living voice to the whole human race. It is impossible to measure what their loss in this respect is, or how sharp the privation; all the greater, all the

sharper, even as they are unconscious of it. When all has been done that can be done for their relief, guidance, and support, the cloud under which they still live is deep and dark. However bright the lining of that cloud,—and no one learns to be more fully conscious of its beauty and brightness than the sufferer himself,—there must be, and there are, times when the darkness grows deep and heavy, and hard to be borne. There are times when the blind man is specially conscious of his isolation. He is apt to grow more and more lonely in his joy or sorrow, toil of body, or toil of mind; he dwells more and more on his own peculiar condition, his own special state—in a word, on himself—as if he were the centre of his own little circle, and born for himself alone. A worse condition than this it is hard to imagine; mind and spirit will be fed, and fed they are on the poorest, weakest, and worst of diet. Doubts, fears, and suspicions spring up wholesale, growing swiftly as all weeds grow, and bearing a bitter and abundant crop. At first they will reach, perhaps, only to the household or society about him; but by degrees the leaven will spread and poison the whole air and atmosphere between him and God; and doubting, which at first touched only the things of time and

sense, will at last undermine the things unseen and eternal. Hence will spring coldness, indifference, deadness, apathy in all matters that relate to the life and joy and peace of the soul; in a word, to his truest and most lasting welfare.

This is, of course, the danger which specially besets the blind child who, in early youth, is often in danger of being cared for only by excessive and unchecked indulgence. By degrees, pity for his sad condition swallows up all other feelings: and he is too often left to think, say, and do just what he likes, or to be left altogether unnoticed and unchecked, simply because he is blind. No kind of treatment can be worse than this, both for the welfare of the unhappy being himself, and for the peace and comfort of all about him. It is impossible to begin too early with a Blind child to teach and to show him that he is not alone in the darkness. Never too early to lead him to believe that the same living and mighty Being who has made, and still controls, and will judge the rest of the world,—is the very same that, unseen, is about, and keeps, and will judge *him* at the last; that there is but one Father of us all in the Heaven above, and that by Him and to Him all alike must live and die.

And no one, be it observed, is more ready and

more willing to learn to believe this than the blind boy, if he fall into the hands of a kindly and loving teacher. "No certainty," as Huber said, "is more sure than the certainty of a blind man;" no faith more ready to take root if the ground be prepared, more steadfast when once convinced, more capable of bearing goodly fruit when it has taken root, and drunk in life from the air and sunshine and moisture about it in the world of seeing men. If the darkness about is deep and dark, the light once kindled within him will, in proportion, be bright and enduring; and the fruit gathered on the tree of faith be ripe and goodly. And, once saved from the darkness, once shown and taught how the battle of life is to be fought bravely and happily, and its true work done even by *him*, no one can be more truly grateful than the blind scholar—as I know well by frequent, positive, and happy experience. Never, therefore, is honest toil more urgently needed, or more heartily repaid.

With a single line of earnest caution I close these final words to all parents of blind children. Begin, as early as possible, the great lesson of life. Whatever their loss, privation or suffering, they have a definite place in life to take. At once, find for them some work

of body, mind, and spirit. Keep all their powers healthily, heartily, and happily employed. Breathe the sunshine of goodwill, and happy toil, and honest pleasure into them with their early childhood. This will be the best antidote to all idle doubts and suspicions; the best cure for selfishness; and most clearly help them to find their happy way to living trust in, and unwavering love for, Him to whom all must account at last. This is, in fact, the work which God himself will complete and crown with His choicest blessing.

THE END.

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